MYRMECIA

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Dr B.R. Champ
Dr I.F.B. Common
Dr E.N. Marks
Dr K.R. Norris
Dr C.N. Smithers
Dr D.F. Waterhouse

MACKERRAS MEDALLISTS

1984 Dr J.A.L. Watson
1986 Dr R.W. Sutherst
1988 Dr T.R. New
1990 Dr R.A.I. Drew
1992 Dr E.S. Nielsen

SUSTAINING ASSOCIATES

Australian Entomological Supplies
Ciba-Geigy Ltd
Cyanamid Australia Pty Ltd
Dow Chemical (Aust) Ltd
Hoechst-Schering AgrEvo Pty Ltd
ICI Australia Ltd

THE COVER

The cover for this year's *Myrmecia* features an illustration of a species of *Myrmecia* (HYM: Formicidae; Myrmeciinae). *Myrmecia gulosa* was selected as the emblem of the Australian Entomological Society as one of the earliest species collected and described from Australia having been collected by Joseph Banks at Botany Bay in 1770.

This illustration of the winged adult was prepared by **Catherine Symington** of the Institute for Horticultural Development, Knoxfield, Victoria.

MYRMECIA

CONTENTS

Executive Report 1
Conservation Committee Report 4
Recent Developments in Endangered Species Legislation 4
Notice of 26th AGM 7
Provisional Agenda for 26th AGM 7
Letters to the Editor 7
International Accord on the Value of Natural Science Collections 8
Regional News
Australian Capital Territory 8
New South Wales 11
Northern Territory 14
Queensland 16
South Australia 20
Tasmania 22
Victoria 22
Western Australia 23
Overseas News 24
Electronic News 24
Coming Events 25
Notices 27
New Publications 28
Society Notices 29

ADVERTISING RATES FOR MYRMECIA

	Single Issue	4 Issues (One year)
Full Page	$60	$180
Half Page	$35	$105
Quarter Page	$24	$72

These rates apply to camera-ready copy supplied by the advertiser. Where this is not supplied, an additional charge may be made for the layout.

In addition, loose inserts and pamphlets supplied by the advertiser will be included in a mailout for $100 per item. The items should be of a size which will not project beyond the pages of *Myrmecia*.

NOTICE

Statements made in *Myrmecia* do not necessarily represent the views of the Australian Entomological Society. Items printed herein should not be reproduced without permission of the author of the material.

COPY DEADLINE FOR NEXT ISSUE

Material for publication in the August 1995 issue of *Myrmecia* should be in the hands of the Editor at the address below by **Friday 21 July 1995**. Submission in ASCII or uuencoded format to the editor's email address (fletchm@agric.nsw.gov.au) is preferred but submission on IBM-compatible floppy disk in a major word processing format, or by fax, letter or carrier pigeon to the address below is acceptable.

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SOCIETY PATRON

The Executive of the Society is proud to announce that The Governor General of the Commonwealth of Australia, The Honourable **Bill Hayden** AC, has agreed to be the Society's Patron. The interest this will attract to the Society's activities will enhance both our reputation and our public profile.

EXECUTIVE REPORT

MEETINGS

The Core Executive met on 23 February, 16 March and 20 April 1995.

NEW MEMBERS

We welcome the following new members to 1995 membership:

Elected 23 February 1995

Mr D ASTRIDGE, BAppSc, c/o Main Camp Tea Tree Oil, Research and Development, PO Box 71, Rappville NSW 2469. Mr Astridge is an R&D Officer and Insectary Manager with interests in Integrated Pest Management.

Mr LR BAGGEN, BMgmnt (Hort), 1/33 March St, Orange NSW 2800. Mr Baggen is a Postgraduate Student at Orange Agricultural College and is investigating integrated pest management strategies for potatoes, specifically the control of the potato tuber moth using the parasitoid *Copidosoma koehleri*.

Ms MA MATTHES, BAppSc, The Cottage, 'Wangaruka', Jamberoo Rd, Jamberoo NSW 2533. Ms Matthes is a Technical Officer with NSW National Parks and Wildlife Service, and has interests in insect/bird/plant interactions.

Ms L MILLER, BSc(Hons), Dept of Entomology, University of Queensland, Qld 4082. Ms Miller is a Research Scholar with BSES and is enrolled as an MSc student.

Elected 16 March 1995

Mr A VAN HARTEN, SPC German Biological Control Project, South Pacific Commission, PMB Suva FIJI. Mr van Harten is a specialist in the biological control of pests and weeds and has an interest in the taxonomy of aphids and psyllids.

Elected 20 April 1995

Dr M FROMMER, School of Biological Sciences, A12, University of Sydney NSW 2006. Dr Frommer is an ARC Senior Research Fellow and is engaged in studies of the molecular biology of the Tephritidae.

Ms RN JOHNSON, 4 Mark Place, Bilgola Plateau, NSW 2107. Ms Johnson is an Honours Student in the School of Biological Sciences, University of Sydney, and is engaged in studies of the molecular biology of the Tephritidae.

Ms MK ROBSON, MSc, School of Biological Sciences, A12, University of Sydney, NSW 2006. Ms Robson is Manager of the Fruit Fly Research Centre and is engaged in studies of the molecular biology of the Tephritidae.

Mr GR TUCKER, Crop Care Australasia Pty Ltd, PO Box 167, Hamilton Central, Qld 4007. Mr Tucker is Research Manager (Agricultural Chemicals).

Resignation from Membership

(Received with regret)

Mr AM SCRIVENER

Ms B VORPAGEL

Change of Address, Status or Title

(February Meeting)

AGRICULTURE VICTORIA has superseded DEPARTMENT OF AGRICULTURE, VICTORIA

Mr RM BULL, Rhone Poulenc Rural, PO Box 49, Indooroopilly Qld 4068 (ex Qld)

Mr GJ BOWMAN, 2/14 Coogee St, East Ballina NSW 2478 (ex NSW)

Mr MG CAIRNS, Menzies College, Latrobe University, Bundoora Vic 3083 (ex Vic)

Dr PJ DE BARRO, title change to Dr, address change to CSIRO Division of Entomology, GPO Box 1700, Canberra ACT 2601 (ex England)

Mr JH HAWKING, Murray-Darling Freshwater Research Centre, PO Box 913, Albury NSW 2640 (ex NSW)

Mr AF HUTTON, Sindia Red Sindhi Stud, Scrubby Creek Rd, MS 80, (via Gympie) 4571 (ex Qld)

Dr JE IRESON, Scientific Services Branch, Dept of Primary Industry and Fisheries, St Johns Ave, New Town Tas 7008 (ex Tas)

Ms RV JACKSON, Status change from Student to Full Member (ex Qld)

Emeritus Professor DS KETTLE, title change from Professor (ex Qld)

Mr J KITT, Dept of Crop Protection, Waite Campus, University of Adelaide, Glen Osmond SA 5064 (ex SA)

Dr MB MALIPATIL, Institute for Horticultural Development, Agriculture Victoria, Private Bag 15, South-Eastern Mail Centre, Vic 3176 (ex Vic)

Mr RGF PIGOTT, 5 Laughton St, Dubbo NSW 2830 (ex NSW)

Mr CR TANN, Aust. Cotton Research Institute, CSIRO Entomology, Wee Waa Rd, Narrabri NSW 2390 (ex NSW)

Mr NL TREVERROW, Tropical Fruit Research Station, NSW Agriculture, PO Box 72, Alstonville NSW 2477 (ex NSW)

Dr SL WENTWORTH,'Kayn Walu', 185 Philip Rd, Avonsleigh Vic (ex Vic)

Mr DG WILLIAMS, Institute for Horticultural Development, Agriculture Victoria, Private Bag 15, South-Eastern Mail Centre Vic 3176 (ex Vic)

Mr GR YOUNG, Entomology Branch, Dept of Primary Industries and Fisheries, PO Box 79, Berrimah NT 0828 (ex NSW)

(March Meeting)

Dr JK BALCIUNAS, ACTFR, Kevin Stark Building, James Cook University, Townsville Qld 4811 (ex Qld)

Mr VR BEJSAK, Konevosa 1685/110, 130 00

PRAHA 3, CZECH REPUBLIC (ex NSW)

Dr LM CHONG LIU (this is the member's correct family name)

Mr WE FROST, to Full Member, new address is Primary Industries (South Australia), GPO Box 1671, Adelaide SA 5001 (ex SA)

Ms M-L JOHNSON, Agronomy Dept, University of New England, Armidale NSW 2350 (ex SA)

Mr JA MACDONALD, BCRI, PMB 10, Rydalmere NSW 2116 (ex NSW)

Ms B MORRIS, 1160 Burke Rd, Balwyn North Vic 3104 (ex NSW)

Ms SA SCOUGALL, family name changed to Mrs A BRANDENBURG, address change to School of Environmental Biology, Curtin University, GPO Box U1987, Perth WA 6001 (ex WA)

(April Meeting)

Dr ML EVANS, Agriculture Victoria, Walpeup Vic 3507 (ex SA)

Mrs AP DEL SOCORRO, status change from Student to Full Member

Dr J KING, Queensland Forest Research Institute, Dept of Primary Industries, PO Box 631, Indooroopilly Qld 4068 (ex Qld)

Mr MI PICKETT, status change from Full Member to Student

SOUTH AUSTRALIAN RESEARCH AND DEVELOPMENT INSTITUTE (SARDI), GPO Box 1671, Adelaide SA 5001 (ex Primary Industries, South Australia) for:

Mr DC HOPKINS
Dr PT BAILEY
Mr GJ BAKER
Mr KR HENRY
Mr WE FROST

Mr RS TOZER, Flycam Pty Ltd, PO Box 405, Kenmore Qld 4069 (ex Qld)

FROM MINUTES OF THE CORE EXECUTIVE

Vale

The Executive noted with regret the death of **Dr Brian Roberts**, late Senior Lecturer in the Department of Ecology and Evolutionary Biology, Monash University.

The 'Directory of South-West Pacific Entomology' is in the final stages for publication. The Directory contains information on over 930 entomologists from most countries in the region covered, will cost $AUS10.00 (including postage) and will be available in June (see ad in this issue of *Myrmecia*).

The Executive has had discussions with Professor **Richard Jarrett**, Committee Member of FASTS, to discuss ways in which the Society may work with FASTS to promote entomology.

The Executive is also seeking to promote entomology in neighbouring countries through the development of societies of professional entomologists in the region. It is proposed that funds for this initiative be sought from AIDAB under their Professional Associations International Development Scheme (see notice below).

The Executive has been consulted on the future activities of the Conservation Committee and is prepared to contribute financially to the preparation of a mobile display promoting the Society's interest in conservation, as well as the Society itself.

The financial position of the Society is strengthening and the Executive is looking forward to furthering the Society's activities.

Contributions were made to the zoologist (including entomologist) occupational description for the second edition of the Australian Standard Classification of Occupations being published by the Department of Education, Employment and Training and the Australian Bureau of Statistics.

The Executive is disappointed that there have been no expressions of interest from members for the position of AES Promotions Officer. We still believe that this position would greatly enhance the business of the Society and entomology, *per se*.

The Society has agreed in principle to an approach by the CSIRO Division of Entomology to support an application that the International Congress of Entomology be held in Australia in the year 2000.

SOCIETY NOTICE

An opportunity for a member to assist the Society to strengthen links with entomological societies in other countries

The Society is seeking a coordinator to develop institutional relationships in the Pacific and South-east Asian regions. This is part of a program initiated by the Executive to promote the Society in the region and also to encourage entomology in these countries by fostering the development of national societies. Another initiative in this program is the soon to be published "Directory of South-West Pacific Entomology".

If you are interested in developing relations with overseas entomologists and encouraging the development of societies of professional entomologists in overseas countries, the Executive is interested to hear from you. One of the main tasks of the coordinator will be to develop an application, together with the Executive, to the Australian International Development Assistance Bureau (AIDAB) for assistance under their Professional Associations International Development Scheme (PAIDS). The position may involve overseas travel for the coordinator.

Please contact Peter Allen
Phone: 08-303 9530
Fax: 08-303 9555
E-mail: allen.peter@pi.sa.gov.au
by 31 July 1995 for further details.

Paul MADGE
Hon. Secretary

Conservation Committee Report

The Conservation Committee completed two small projects in recent months: tidying up the last ends from the questionnaire on current research projects relevant to conservation of non-marine invertebrates (publication now available from the Society) and writing a submission on the Australian Nature Conservation Agency's (ANCA) public discussion paper on "Listing of ecological communities under the Endangered Species Protection Act 1992".

The questionnaire soliciting information for the recent AES publication, *Conservation of Non-marine Invertebrates: Australian research Projects, 1994*, also requested lists of relevant publications. The references thus gathered are a mixture of mainstream papers, internal public service reports and even a few newspaper items. They were not included in the final booklet but are now available to members of the AES in printed copy on request to the Convener of the Conservation Committee. An electronic copy can be supplied if a diskette is provided.

ANCA's Public Discussion Paper on "Listing of ecological communities under the Endangered Species Protection Act 1992" was made available in January this year. Several members of the Conservation Committee were involved in its preparation - the opinions of others were combined in a submission to ANCA! We can only get it right ... Basically we supported the ANCA document, although expressing concern that only endangered and not vulnerable communities are considered. We also suggested that there may be a contradiction in listing as "endangered", communities that are already known to be "extinct". Again a copy of the submission can be obtained from the Convener of the Conservation Committee.

Some members are expressing concern at the rather piecemeal way the legislature of the various Australian governments is dealing with endangered invertebrates (see report below). Some states have listings of "endangered", "vulnerable", "common", etc., invertebrate species, including some insects. If AES members feel this is something the Society should concern itself with, they may like to contact the Conservation Committee with suggestions or recommendations. Do you believe that there are particular insect or other arthropod taxa that require nomination under the Endangered Species Act?

Your involvement will keep your Conservation Committee alive! Don't hesitate to contact us with matters you feel we should be addressing.

Alice WELLS
Convenor
Conservation Committee

Recent Developments in Endangered Species Legislation

We have moaned and groaned for years that conservation priorities and funds were only given to cute and cuddlies, ie the vertebrates, and pretties, the plants. With recent State and Federal government initiatives, largely developed in response to the International Biodiversity Convention, at last we thought our concerns about invertebrate losses were being taken seriously and resulting in action. But the question is are the creatures really going to be any better off as a result?

Several States have decided to proceed with endangered species legislation and are taking care to include invertebrates. For instance legislation enacted in Queensland in December 1994 as a Regulation of the Nature Conservation Act, listed 25 species of butterfly as protected fauna. In Tasmania many of 175 species published last year

in an interim list of threatened invertebrates, are included in legislation that is currently (March 95) before Parliament. Western Australia is at present calling for suggestions as to what species should be listed and have already given legislative protection to 16 invertebrates, mainly Crustacea and spiders but the list also includes all buprestids. The ACT government are currently considering a proposal to establish a list of endangered species. The Victorian Fauna and Flora Guarantee, which was the earliest legislation, now has 27 invertebrates listed. In the case of Queensland and Tasmania, any species listed in a schedule cannot be "caught trapped, kept or interfered with" without a permit or in some case without paying a levy. So the first impression is that these new rules might be quite a serious impediment to research on the listed species.

The question that bothers biologists most is whether permits to study the protected species will be easy to obtain. In fact the aim of the listing should not of course make it difficult to obtain a permit for *bone fide* amateurs, students and professionals with a research plan and a willingness to report their results to the relevant conservation agency. The information collected will be of value in managing the species and its habitat more effectively so certainly should be welcomed by the relevant State bodies. There is however, not unreasonably, a genuine concern that obtaining a permit to study any listed species might become so difficult that it actually discourages further studies. Although we all know of cases where permits have been hard to get, in fact studying a listed species should be facilitated because of its acknowledged endangered status and hence need for information to improve management. But if permits are requested only to collect specimens for exchange or sale, then I think we would all agree that this kind of activity is undesirable for a threatened species. If the legislation can prevent these activities, then all to the good.

We are not going to discuss here the merits or otherwise of listing species. This issue has been thoroughly masticated in *Myrmecia* in the past. Suffice to say that we all agree, I am sure, that habitat protection is a better way to go or perhaps, more practically, site protection. The problem is that any proposed legislation to protect ecological communities runs into difficulties of definition. For instance, doubts have been expressed in the past as to whether "ecological communities" really exist. In other words does the concept actually have any validity? Moreover, before any new conservation measures are enacted, it is imperative that the wider community support them. Land users such as farmers, the mining and forestry industries and other land developers have problems in accepting the somewhat woolly and even mercurial aspects of "ecological communities", "habitats", "assemblages" and the like. So, at present we are stuck for the most part with accepting that SOME listings of invertebrate species are inevitable as the best available course of action presently available to draw attention to their conservation importance. However, in a move which should be welcomed by the "invertebrate community", the Federal government has released a Public Discussion Paper on a proposal to list ecological communities under the Endangered Species Protection Act 1992. The last date for submissions to the document was March 31st but I would expect this will be extended, at least unofficially. I would urge therefore, any of you who are strongly opposed to listing individual species, to make a contribution to this other proposal.

Another question that is frequently asked is this. Is the legislation actually going to result in more effective protection for the species concerned? No matter how valid our criticisms of listings might be, the fact remains that when government agencies are undertaking conservation assessments, such as they have done recently into which forest compartments should be felled for wood chips, those where listed species occur are given priority for protection. So here we have a case where listing, although probably primarily politically driven, does actually benefit conservation of habitat.

Having stated the case as I see it for listing species, I will now make some more detailed comments on the problems with the Queensland and Tasmanian listings.

Twenty five species and subspecies of butterfly were listed in Queensland by Nature Conservation (Wildlife) Regulation No 474 1994. All are protected, seven are classified as endangered, ten as vulnerable and eight as common. **Michael Braby**, currently engaged in writing the definitive new book on Australian butterflies, has estimated that half these species are probably not threatened and the distributions of

a further quarter are too poorly known to determine for certain whether they are or not. The general feeling about the Queensland list is that no consultation was undertaken in the entomological community before these species were listed. Moreover the Richmond Birdwing is one of the listed species. As some of you may know there has been a major community effort in south eastern Queensland, in which **Don Sands** has been heavily involved, to increase populations of the species by planting its host plant in school grounds, home gardens and the like. There is also a plan to release captive-bred adults into the wild. If this program is slowed or halted as a result of the legislation, then this would be a clear example of the legislation actually damaging the conservation status of the species.

The Interim List of Native Invertebrates which are rare or threatened in Tasmania lists 175 species, 7 extinct or presumably extinct, 8 endangered, 18 vulnerable and 142 rare and rare (susceptible). Of these, all presumably extinct, endangered, vulnerable and rare (susceptible) are listed in Schedule 3 (endangered 14 species), Schedule 4 (vulnerable 18 species) and Schedule 5 (rare 80 species) of the Threatened Species Protection Bill 1994 being debated by the Tasmanian Parliament at present. Nineteen species on the Tasmanian Interim list are undescribed but these have not been included in the schedules apart from an onychophoran which has been inadvertently given a name and an incorrect authority! The problem with listing undescribed species is that not only can one not tell what they are, but it is not possible to validate any statements made about these species either in terms of their affinities nor their distributions*. I would suggest that undescribed species in future be omitted from any published lists and certainly should never be enshrined in legislation. A system of code numbers for undescribed species might be acceptable but the code number must be referable to a single specimen deposited in a National or State Museum and validated by the specialist taxonomist. Moreover a publication which describes the distribution of the unnamed species using its code number must be available. Listings of non-validated species can very easily be demolished by critics with the resulting undermining of any more authoritative named listings and subsequent loss of credibility for the whole process.

The Tasmanian list also includes a number of errors and omissions concerning dates and authorities and, apart from an apparent *nomen nudum* or two, was also the catalyst for the inadvertent publication of a species description, much to the consternation of the systematists actually in the process of properly describing the said species. Moreover the Tasmanian list includes 34 Trichoptera i.e. about 60% of the insects and 49 hydrobiid snails, nearly a third of the total species listed! This certainly illustrates the influence of taxonomy, or perhaps more accurately taxonomists, on the listings! Moreover, to some extent, it seems the Tasmanian list was both compiled and refereed by the same small group of people, most of them not taxonomists.

At our seminar in CSIRO on this whole issue in March, several points became clear

1. The information flow about these lists, even though some were species we had described ourselves, was very poor. Lists were published in Queensland and Tasmania before many interested systematists and other entomologists, both amateur and professional, had seen them and without the lists being externally peer refereed.

2. The influence of taxonomy on the listings is marked; with considerable bias towards a small number of higher taxa.

3. The influence of the lists on taxonomy is also marked with the inadvertent publication of misinformation, *nomina nuda* and new species.

4. It is necessary that lists should be flexible, that is, it should be possible to add species if they become threatened and remove them when action plans to protect them have taken effect. The Tasmanian list is supposed to have this flexibility.

Amid all the hullabaloo over these lists, one point has not yet been made and it is an important one. Listing a species actually can sometimes facilitate the flow of funding to study it. In fact one granting agency (ACT Parks and Conservation) make it a condition for funding; they stipulate that if it is not a nationally threatened species, a study of it will not be funded even thought there are no nationally listed invertebrates yet. So, it follows that if a species you want to work on is listed, take advantage of it and apply for a grant! You should have a good chance of success.

The take home messages are therefore:

1. State government agencies must get their internally published documents i.e. those with ISB numbers, rigorously externally refereed.

2. More thorough consultation should take place before species are listed and this means outside the State in question among the wider scientific community.

3. We should be more proactive during the process of listing and respond to requests for information, requests to sit on committees and the like, at least in order to stop inappropriate species being listed.

4. We should not immediately assume that the legislation as enacted is destined or even designed to harass us, but that it may actually facilitate our research and result in greater protection for a species habitat.

NB: Copies of the Commonwealth's Public Discussion Paper on the proposal to list ecological communities can be obtained from **Brendan Edgar**, Endangered Species Unit, ANCA, PO Box 636, Canberra, ACT 2601.

Tony Friend of the Department of Conservation and Land Management, Western Australian Wildlife Research Centre, PO Box 51, Wanneroo, W.A. 6065 is coordinating additions and modifications to a list of the "Declared Threatened or Specially Protected" invertebrates and will send a form on request.

*The 1994 IUCN Red List of Threatened Animals does also list an undescribed invertebrate from Australia (among 403 other threatened or extinct Australian invertebrates, the third largest number from any country!).

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THE AUSTRALIAN ENTOMOLOGICAL SOCIETY INCORPORATED

NOTICE OF 26TH ANNUAL GENERAL MEETING

The Society's 26th Annual General Meeting will be held in Tamworth, NSW on 25th September 1995. A provisional agenda list appears below. Members who wish to have additional items included in the Agenda for discussion at the 26th AGM need to provide the Secretary with details by 14 August 1995.

Provisional Agenda for 26th Annual General Meeting

1. Opening and General Announcements
2. Announcements of Proxies and Apologies
3. Deaths of Members recorded since 25th Annual General Meeting
4. Minutes of 25th Annual General Meeting (Published in *Myrmecia*, November 1994)
5. Business arising out of the Minutes
6. Executive Annual Report, including reports of Vice-President, Treasurer, Business Manager, Chief Editor and Editor of News Bulletin
7. Committee Report
   Conservation Committee
8. Competitions and Awards
   1. AES Insect Illustration Competition
   2. AES Photographic Competition
   3. AES Research Grants
   4. AES Phil Carne Prize
   5. AES Service Award
9. Business arising from the 48th Council Meeting, Adelaide
10. Announcements of Office-Bearers and Councillors for 1996
11. Report of the Organising Committee, 26th Annual General Meeting
12. Report of the Organising Committee, 27th Annual General Meeting
13. Other business (arranged with the Secretary no later than 14 August 1995)
14. Close

LETTERS TO THE EDITOR

Dear Sir,

I should like to thank all my former students, staff and friends for giving me a most memorable afternoon on the 18th February. It was delightful to meet with you all again especially those I had not seen for many years. I hope that you all enjoyed the afternoon as much as I did. I should also like to thank you all for the magnificent set of Kirby and Spence, this will certainly be a valuable addition to my reference library. I wish you all the best for the

future and hope to keep contact with at least a few of you.

Fred McDONALD

INTERNATIONAL ACCORD ON THE VALUE OF NATURAL SCIENCE COLLECTIONS

Manchester, UK, May 1995

This report on an International Conference on the Value and Valuation of Natural Science Collections held in May in Manchester, UK. was posted to MUSEUM-L, TAXACOM and MOLLUSCA and is reproduced here for the benefit of members without access to these listservers.

THE VALUE OF
NATURAL SCIENCE COLLECTIONS
INTERNATIONAL ACCORD

Natural science collections held in museums and similar institutions are an irreplaceable world resource used for the long-term benefit of society. We, the practitioners attending the Conference, place a high value on collections, and confirm our dedication to their proper curation and making such collections and information about them accessible to users.

The International Conference on the Value and Valuation of Natural Science Collections, held in Manchester, UK in April 1995, calls upon all governments to support museums and other institutions which provide for the use, care and development of natural science collections. Governments should promote and implement strategies that will:

1. recognise the value of natural science collections to society in scientific understanding, education, interpretation, public enjoyment and inspiration, environmental protection, cultural identity, generating prosperity and encouraging sustainable development.
2. develop facilities that extend and improve the beneficial use of natural science collections in the long-term.
3. identify the important role that natural science collections play in assisting them to achieve governmental policy objectives, including international obligations.
4. ensure that natural science collections are accessible, curated and documented, to internationally agreed standards.
5. develop and support training programmes and educational opportunities that will improve the level and continuity of expertise upon which the use of natural science collections depends.
6. recognise that the value of natural science collections lies in their scientific and cultural importance, and that, although in certain circumstances it may be possible to place a verifiable financial valuation on such material for accounting purposes, there appears to be no demonstrable advantage in doing so.

The conference delegates expressed concern about the particular requirements of areas of special need such as eastern Europe and Africa. Because of the global significance of natural science collections, governments in the developed world have international responsibilities to provide support through established aid programmes.

REGIONAL NEWS

AUSTRALIAN CAPITAL TERRITORY
ANIC/ANU

The systematics group working with **Penny Gullan** at the Division of Botany and Zoology, Australian National University, provides the best news for this quarter. Amongst the good tidings is that **Ireneo (Jun) Lit**, from the Entomology Museum of the University of the Philippines at Los Baños, is eligible and therefore likely to be funded by AusAID (once AIDAB) with an Australian Sponsored Training Scholarship. Jun intends to study the regional lac insects (Kerriidae).

New PhD student **Robert Hoare** accompanied Canberra - visiting **Chris Reid** when he returned to Townsville. Robert reported no adult nepticulids arrived at light (quite unlike Black Mountain), but he discovered many mines and returned with extensive host records and much material for rearing.

Two more of Penny's current PhD students, **Kendi Davies** and **Brett Melbourne**, presented their first seminars to the Division of Botany and Zoology in mid-April. Judging by audience reaction,

Brett might have to down-scale the scope of his study in aquatic macroinvertebrate distributions.

Also studying scale(s), **Lyn Cook** is the benefactor of a Michael White Travel Award from A.N.U. She is perhaps the first recipient of the award to be working precisely in Michael White's own research field. Lyn will travel to either North American meetings on Systematics and Social Biology, or the European meeting of the Society for Evolutionary Biology, where sessions on cytology and evolution are appealing.

The laboratory has also found space for Taiwanese entomologist **You Ning Su**, presently studying English prior to commencing higher studies. **You** is working through the crickets collected in **Brett Melbourne**'s honour's project grassland survey, with assistance from **Dave Rentz**.

By the time you read this, CSIRO and the wider world may know the fate (if any) of our less-than-popular Institute structure, and maybe the identities of the Chief Executive, the Chief of the Division of Entomology and deputy program leader for taxonomy will have been revealed. Aha, I hear you say, what is this latter post and why is it vacant ? Well, **Ian Naumann** deputises for **Ebbe Nielsen** no longer: the rush of volunteers to replace Ian was inaudible. Amongst the first to commend Ian for dusting off his microscope to deliver more of his research expertise in parasitic Hymenoptera was **Andy Austin**, who was visiting Canberra for the Nicholson meeting.

Mike Hodda has been recruited to work part-time on enhancing the CSIRO (ANIC) Nematode collections aided by **Frances Fitzgibbon**. Mike has promptly taken himself to Costa Rica to participate in a Taxonomic Working Group for what our newsletter calls a "TaxaBiotic" inventory. Guesses as to whether TaxaBiotic is a mistranslation, tautology and/or another neologism, on a plain postcard, please.

Some of the Soil Biology Unit have been wandering around zombie-like with exhaustion after a 2-week course on the taxonomy and identification of soil-dwelling microarthropods. For the uninitiated, these organisms are actually Collembola and oribatid mites. Recipients of the welter of advice from **Penny Greenslade** and **Matt Colloff** were the Soil Biology Unit technical staff and also participants from NSW Agriculture, Griffith University and University of Sydney. The successful course will probably be repeated in coming years, given sufficient demand. Anybody interested should contact pennyg or matthewc@ento.csiro.au for further information.

John Hawking of the Murray Darling Freshwater Biology, surely a self-flagellant in his spare time, organised another workshop for those participating in the Monitoring River Health Program. Amongst the contributors to February's family-level identification workshop were **John Lawrence**, who presented keys to adult and larvae of aquatic beetles, whilst **Pete Cranston** returned from lunch with **Terry Hillman** just in time to recount all he knew about non-chironomid aquatic Diptera and present a plagiarised key.

It hasn't been all workshops, with several entomologists getting out into the field and discovering the relative merits of different 4WD. **Marcus Matthews** and **Ted Edwards** lepidopterised widely around the north, with Marcus enjoying it so much he has stayed on for a second shift, accompanied for this leg by **Marianne Horak**. During March, three ANIC staff joined the Museum of Victoria sponsored commemoration of the 1894 Horn Expedition to central Australia. **Tom Weir** and **Pete Cranston** drove to Alice Springs to accompany the first two stages of expedition, seeking appropriate waterholes for aquatic insects in the MacDonnell Ranges and Finke Gorge National Park. After a fortnight, Tom and Peter gave the vehicle keys (and debogging instructions) to **Dave Rentz** and flew home, leaving Dave to make successful Orthoptera collections in the much drier Wattarka National Park (King's Canyon) and Uluru and Kata Tjuta before bringing the field vehicle and livestock back to Canberra.

ANIC has commenced a survey of a large tract of mallee in South Australia near Renmark. The site, within the Bookmark Biosphere Reserve, is in the early stages of rehabilitation following sheep grazing. None-the-less, it is a fine parcel of land (about the size of the ACT!!) with many habitats that have not been severely affected by the sheep, and efforts are being made to rid the place of feral animals and weeds. **Dave Rentz** is the project manager and **Kim Pullen** has been recruited to act as the project officer for this ANCA sponsored study. Five sites have been selected for surveys utilising Malaise traps, flight-intercept and pitfall traps on a permanent basis and ambient collecting, soil cores and litter samples have been taken. Kim will visit the sites each month and

collect samples which have been sorted by **Anne Lambie** who lives on the Reserve. In just two months of sampling many interesting species have been collected, including 9 species of Whirligig mites of the family Anystidae being studied by media-star **Jurgen Otto**.

After a very long 18 months or so, work has been completed on the ABRS Cockroach Catalogue, a Herculean task was accomplished by **Alison Roach** (who tells me she has heard all the jokes re her name). Together with the mantid and stick insect catalogue, this should prove an invaluable introduction to the literature for any student wishing to study these insects.

As presaged in the last report, **Laurence Mound** has returned to take up his McMaster scholarship. Since leaving Australia this peripatetic thysanopterist (or thripsologist ... thanks to Tom Bellas for the correction and true etymology) has been working in Brazil and Taiwan. His Australian schedule is equally hectic - expect to see Laurence in your state soon.

Amongst the many recent visitors to ANIC it was good to see **Nina Wedell**, who was completing several months study at Melbourne University prior to returning to Liverpool, and **Phil Weinstein**, who continues to risk life and limb in seeking entomofauna in north Queensland caves.

Pete CRANSTON
Regional Councillor

CSIRO Division of Entomology

Late April saw the retirement of **Keith Wardhaugh** after a career of some 28 years in the Organisation. Keith originally came to Australia on secondment from the Anti-Locust Research Centre in London in 1968, and worked in the Division of Entomology on the Australian Plague Locust for six years. He subsequently moved to Narrabri where he worked on heliothis in cotton for three years under the Plant Industry banner, then in 1977 moved back to the Division. Over the next 18 years he worked in the dung beetle and blowfly programs, and most recently, on studies of the avermectin group of chemicals. While it goes without saying that we wish Keith all the best for his retirement he has taken up a position as an Honorary Research Fellow in the Division, so we expect to see him for some considerable time yet!

Elsewhere, amid the glorious sun and colours of Canberra, some 200 delegates from 13 countries attended the A.J. Nicholson Centenary Meeting "On the Frontiers of Population Ecology", organised on behalf of the Australian Academy of Science, the Australian Entomological Society and the Ecological Society of Australia by a committee convened by **Paul Wellings**, and comprising **Louise Lawrence, Joanne Daly, Andy Shephard, Rob Floyd**, and **Paul De Barro**. The Meeting commemorated the centenary of the birth of **A.J. Nicholson**, who was Chief of the Division of Entomology from 1933 to 1960. A complete report of the conference will be published in the next edition of *Myrmecia*.

And, on the topic of Chiefs, **Max Whitten** has been keeping up his usual pace at home and abroad, visiting the CTPM in Brisbane, attending a discussion about a proposed new FAO IPM facility in Nairobi, and speaking on "People, plants and patents: issues in managing global genetic resources" at the National Press Club in Canberra.

Other travellers to and from the Division included **Jonathon Banks** who visited Ottawa in his role as Chairman of the UNEP Methyl Bromide Technical Options Committee, **Richard Milner** and **Chris Prior** who have been in Mali and Benin to attend CABI project meetings, and **Penny Edwards** who visited the Divisional lab in Cape Town and the Plant Protection Research Institute Lab in Stellenbosch. She, **David Briese, Mark Lonsdale** and **Jim Cullen** also attended a "Weeds of Conservation Workshop" in Adelaide in early April. The Weeds CRC inaugural Board Meeting was held recently in the Division, and chaired by **John Kerin**.

Safe travelling to **Wendy Milne**, who continues to cover vast distances on her aphid field trips. After various trips through the Murray/Goulburn valleys, her next major outing will involve a journey through high altitude regions from Bega to south-east Queensland, on a pilot survey of the areas for a DRDC sponsored project.

Coming into the Division, **Helen Holt** has joined **Val Baule**'s group as a post-doctoral fellow and will develop a quantitative assay for expressed levels of BT toxin in transgenic cotton plants. **Herma Oosterlaken** and **Mariella van Hulten**, both from Wageningen, have arrived for visits of several months and are working, respectively (respectfully?), with **Richard Milner** and **Terry Hanzlik/Karl Gordon**. Welcome aboard to all of them!

David DALL
Regional Councillor

NEW SOUTH WALES

Biological & Chemical Research Institute, Rydalmere

Murray Fletcher, Peter Gillespie, Mark Stevens (Yanco ARI) and **Max Moulds** (Aust. Mus.) held a meeting in Canberra on 22 February with **Max Day** to continue preparations for the 9th International Auchenorrhyncha Congress to be held in Sydney in 1997. Murray and Peter also attended the Zimmie medal presentation detailed in the last *Myrmecia*. Two weeks later, Murray was back in Canberra for **Penny Greenslade**'s seminar on Endangered Species Legislation and to attend the launch, in the Senate Garden at Parliament House, of **Andy Beattie**'s book on "Biodiversity, Australia's Living Heritage" launched by Senator **John Faulkner**, Minister for the Environment. An opportunity to collect leafhoppers in the Mittagong area was taken on the intervening day with **Max Day**. Many of the Australian leafhopper species described by **G.W. Kirkaldy** in 1906-1907 were collected in the Mittagong area by **Arthur Koebele.**

The Taxonomy Unit has again participated in the CSIRO Student Research Scheme which gives bright high school science students the opportunity to undertake a short project in a real laboratory. This year we will again host four students who will each prepare, identify and research specimens submitted to the Unit for identification and control advice. On completion of the project, each student prepares a report and presents a seminar to his/her school peers. A poster is also prepared for the Scheme Presentation Night later in the year.

John Macdonald and **Danuta Knihinicki** spent a few days in the ANIC, Canberra being trained in the preparation and identification of oribatid mites by **Matt Colloff**. John and Danuta also took the opportunity to discuss with **Bruce Halliday** early preparations and our involvement in the Xth International Congress of Acarology to be held in Canberra in 1988.

Danuta Knihinicki attended a Herbs and Essential Oils Conference at Tocal in the Hunter Valley in April to discuss her MSc project on eriophyid mites on tea tree, *Melaleuca alternifolia*, with industry representatives.

Victor Rajakulendran has been dragged into the work on Western Flower Thrips because of a positive identification of the species in a Lebanese cucumber crop in Sydney's west. Crop yields are down by around 50% relative to the previous year and new plantings are showing severe thrips damage. Victor also hosted a visit from Mr **Sudarmadji Rahardjo**, Vice Dean II at the University of Mataram, Lombok, Indonesia in early April. Dr Rahardjo is funded by an Indonesia Australia Eastern Universities project to study IPM practices in vegetables in Australia. Dr **Ravindra Babu**, Manager, Europe and Pacific Region, for Merck Agvet, also visited the Institute to see Victor and **Grant Herron**.

Graeme Baker hosted a visit by **Chris Prior** of the IIBC, Ascot, UK on 21 March. Chris is in Australia on a McMaster Fellowship working jointly with Graeme and **Richard Milner** (CSIRO, Canberra) on use of the fungus *Metarhizium flavoviride* for the control of Australian plague locust and wingless grasshopper. While at BCRI, Chris presented a seminar on the use of fungi as insecticides.

Alan Clift represented us at the Nicholson Centenary Meeting in Canberra in April and presented a paper on RESMAN, a simulation model of resistance development and management, a joint contribution with **Grant Herron** and **Mary Ann Terras**.

Gary Levot's skills as a forensic entomologist have been called on several times in the last month as bodies keep turning up all over the place. Gary has also been required to present himself as an expert witness in the odd courtroom.

Martin Horwood has been involved in discussions with the Standards Australia Committee developing new standards for termite control in buildings in line with changing building code requirements.

Department of Medical Entomology University of Sydney at Westmead Hospital

The staff changes continue at Medical Entomology with the welcome addition of **Agnieszka (Agi) Majder** and **Karen Willems**. Agi has replaced **Peter Wells** and will be continuing vector competence studies along with **Stephen Doggett**. Karen has worked at Medical Entomology previously when she replaced **Merilyn Geary** while Merilyn was being trained in the use of the Hospital's computerised pathology network. Karen will be starting a Masters degree investigating the ecology of freshwater mosquitoes in the Homebush Bay area (the Olympics site and surrounds) of Sydney. With the time honoured

tradition of new staff required to bring in a chocolate cake to celebrate their good fortune, the older staff members are quickly adding inches to the waist line.

The work on the saltmarsh mosquitoes at Homebush Bay has continued, keeping Merilyn, **Richard Russell, Steve Lindsay** and **Cameron Webb** relatively busy; Richard and Cameron have also been investigating the mosquito production of an artificial wetlands created to 'treat and polish' stormwater from a drainage basin in the western suburbs before it is discharged into the river systems.

Since the last *Myrmecia*, there has been some major arbovirus activity along the south coast of New South Wales, with over 100 human serologically confirmed cases to date. This has kept **Stephen Doggett, John Haniotus** and **John Clancy** extremely busy with 136 arbovirus isolates (previous record was 66) including Barmah Forest, Ross River, Edge Hill and Stratford. Most of the afflicted humans have been infected with Barmah Forest virus.

Stephen, Merilyn, Karen and Cameron made a large collection of larvae in Batemans Bay during the outbreak, to examine the possibility of transovarial transmission. To date none of us have been infected, although we thoroughly recommend the excessive consumption of Mountain burgers at Pilgrims food (no commercial interest) in Milton for antiviral prophylaxis.

Other field trips included Port Stephens and Narrabri by Stephen, Merilyn and Cameron to collect mosquitoes for Agi's vector competence work.

CERIT Biological Science
University of New South Wales

Over the past few months CERIT has again commenced teaching of the undergraduate Insect Diversity and Management course. It was our pleasure to have **Fred McDonald** responsible for teaching the taxonomy and morphology sections of the course while **Jenny Anderson** is temporarily absent running her sheep property at Gulargambone. Fred commented at the high level of the students' enthusiasm shown for the course.

Chris Virgona made one of his regular trips to CSIRO Chemicals and Polymers division in Melbourne, and **George Holan** also from this division visited us twice.

Eight members of the Unisearch Consulting and Research division came on a visit to see the range of testing facilities we offer clients. However they didn't seem too keen to spend much time with our insect cultures, particularly the blowflies.

Julianne Farrell rejoins us shortly after a summer job with Bayer - she is continuing her Agricultural degree externally and will be at CERIT as a volunteer.

Other visitors included **Graham Williamson**, Product Marketing Manager, and **Richard Murray**, Product Development and Technical Service Manager, both from Dow Elanco.

Steve DOGGETT
Regional Councillor

Crop Protection Unit and Zoology Department University of New England.

The crop protection unit has had quite a reshuffle recently. **Alice Del Socorro** graduated with her PhD this month and is now working as a research officer with the CRC for sustainable cotton production. **Peter Gregg** has been in Canberra attending the Nicholson Centenary meeting. **John Stanley** has become a part-time student in order to join CSIRO Division of Entomology in Brisbane. **Supawan Kianmatee** has also left after submitting her Masters thesis. Supawan has returned to Thailand to take up a position with the Department of Agriculture in Bangkok.

Continuing their PhD studies are **Angela Nesic** and **Moazzem Khan** on population ecology of *Agrotis* sp. and mirids in cotton respectively. New to the unit is **Marie-Louise Johnson** who has commenced a PhD on the efficiency of beneficial insects in cotton.

The Zoology Department has also had some new postgraduate students. **L. Bird** is studying the effects of Azadirachtin on *Heliothis* spp. and **L. Blunden** respiratory behaviour of aquatic insects. Working on *Drosophila* sp. are **P. Doyle, K.L. King, M. Murray** and **S.Y. Wang. K. Holtkamp** is looking at the population ecology of flower head insects and **P. Robinson** is evaluating two species of parthenogenic nematodes. Finally **Suratman** is studying the effects of pesticides on non-target soil arthropods.

Those students that have completed or submitted recently are **Stephen Asante** whose PhD was biological and ecological studies on the woolly apple aphid, *Eriosoma lanigerum*. **A. Baker, L. Parkinson** and **M. Strickson** completed their

Honours on litter fauna in regrowth and mature woodlands, invertebrates of leaf litter in New England streams and cold tolerance in *Epiphyas postvittana* respectively.

Recently returned to the Zoology Department is **Prof. Danthanarayana**. All studies are going well and everyone is preparing for the cold New England Winters.

School of Biological Sciences
Macquarie University

Congratulations to **Max Moulds** and **Lilian Blanco**, who graduated in April, MSc and PhD respectively. We welcome new MSc student **Danuta Knihinicki**, who's starting a project on eriophyoid mites part-time, and new honours student **Jenny Mirkazemi**, pushing forward the barriers of ecdysteroid receptor gene structure in an aphid. Jenny's work is co-supervised by **Ron Hill** and **Garry Hannan** at CSIRO Biomolecular Engineering, with **Dinah Hales**. Ron and Garry are now Honorary Associates of the School of Biological Sciences.

True to the predictions in the November 1994 issue, the Hales habitat has undergone total destruction and they are now settled (but rather cramped) in a new one. The M2 motorway has also wiped out much of the Macquarie Ecology Reserve.

Paul Sunnucks and Dinah have had a busy few months mainly writing things, papers and grant applications. Paul presented a paper at the Nicholson meeting on work from his life before aphids, but is planning to spread the (aphid) word at Genetics Society

The Westoby lab sees **Ros Blanche** and **Lou Rodgerson** in the final weeks of finishing their theses. Life will not have time to return to normal for long for Lou because she is starting a position in the Department of Biological Sciences at Wollongong University at the end of June.

Andrew Beattie and other RUBB members are to be congratulated on the launch of their book entitled "Biodiversity: Australia's Living Wealth". After the formal launch in Canberra by the Federal Minister for the Environment, **Senator John Faulkner**, a local launch was held at the University with **Robyn Williams**. The book is aimed particularly at those people who do not have a formal education in biology but who are interested or involved in making government and business decisions which involve the environment. Though most people interested in biology are likely to enjoy reading the book and discover something they never knew!

Lou RODGERSON
Regional Councillor

State Forests of New South Wales
Research Division

Bob Eldridge succumbed to a mystery illness at the end of 1994 and spent many weeks offering himself up as a guinea pig to medical science, being tested for every arbovirus known to man, and a few more. Bob says he is the fittest man in Australia and has the documents to prove it! Fortunately he is now back on deck. Biology Section has seen little of him in recent weeks as he has travelled around setting up field trials for termite testing, attending meetings for the preparation of a new Australian Standard on termite control in new buildings, and catching up on many managerial tasks. He and **Darren Waterson** ran a *Sirex* workshop at Bathurst in April, which was attended by a South African delegate. They also wish to thank South African ex-patriots for keeping them busy with a regular supply of infestations of European house borer (*Hylotrupes bajulus*) and West Indian drywood termite (*Cryptotermes brevis*) in their imported furniture. Darren, after a trip to the US in December, is now working in Papua New Guinea for the next month with the Army Malaria Research Unit.

Debbie Kent has successfully converted her University of Sydney MScAgr candidature to a PhD candidature. Her thesis, entitled "The biology and ecology of three ambrosia beetles (Coleoptera: Platypodidae) infesting the heartwood of living *Eucalyptus* spp." is well underway. She and Darren successfully moved a *Coptotermes acinaciformis* nest into a special tank in a temperature controlled room in the insectary in November. It appears to be thriving and **Nathan Lo** from Sydney University is using it in his physiology studies.

Debbie, **Christine Stone** and **Chris Ann Urquhart** have been busy writing leaflets on various eucalypt pests for the Joint Venture Program. Christine is still busy working on psyllids in moist sclerophyll forests.

In January, the Insect Collection moved into its new home, and is very happy there. Chris Ann is preparing a checklist of the species held in the

collection, and the Coleoptera section is virtually complete. It will probably be published as part of State Forests' Forest Resource Series.

NORTHERN TERRITORY

Many NT entomologists could not be traced at the time contributions for *Myrmecia* were being solicited. It is believed they are all holed up in secret drying-out clinics in the hills after over-indulging on chocolate bilbies during the Easter weekend.

Conservation Commission of the Northern Territory. Wildlife Research Unit

Peter Dostine made a brief foray back to old territory to attend the ERISS (Environmental Research Institute of the Supervising Scientist; formerly ARRRI, Alligator Rivers Region Research Institute) workshop on research for conservation and management of wetlands in northern Australia. The Workshop was held at the "Croc" Hotel in Jabiru and was attended by a formidable array of wetland experts from throughout Australia.

Meanwhile, Gouldian finch research lurches onward. One of the proposed causal factors in the decline of the Gouldian, the air-sac mite, has been found to occur at comparable levels of infection in a second species, the Pictorella mannikin. What does this mean for the survival of the Gouldian finch, or indeed the Pictorella? Stay tuned!

CSIRO Division of Wildlife and Ecology Tropical Ecosystems Research Centre

CSIRO ceased its management role at Kapalga Research Station in Kakadu National Park at the end of May, as the Division of Wildlife and Ecology begins its new research program on the North Australian Tropical Transect (NATT). NATT is part of an international research effort aimed at developing a predictive understanding of the responses of the world's savannas to stress and disturbance and is the focus of the new CRC for Sustainable Development of Tropical Savannas. Fieldwork for the Kapalga fire experiment has therefore finished, so that all that is left is about 50 years of specimen sorting by **Alan Andersen** and **Lyn Lowe**. CSIRO is negotiating with the Australian Nature Conservation Agency (ANCA) for the continued operation of Kapalga as a research site.

While on the subject of ANCA, Alan has contributed a chapter on insects for a new Kakadu Resource Book to be published by the North Australia Research Unit of ANU. The chapter is a compilation of the information known on Kakadu's insect fauna, both terrestrial and aquatic, and includes generic listings for termites, ants, grasshoppers, ants, mayflies, dragonflies, ants, caddisflies, ants and chironomids.

Danish visitor **Mogens Nielsen** has completed his sabbatical in Alan's lab and has returned home. He produced a rather profligate three manuscripts during his 6-month stay, one on the nesting biology of *Polyrhachis sokolova* (which nests in mangrove mud), one on the foraging energetics of *Rhytidoponera aurata*, and a small one on the relationship between *Crematogaster* sp. and the coccid *Alecanthopsis mirus* in mangroves.

University of Queensland Wildman River Cashew Plantations

Shaun Hood is about to investigate the efficacy of Neem compared to other chemical and biological insecticides frequently used at Wildman River on cashews (gesundheit!). The product to be tested is currently on its way from India. A trial permit has been obtained and Shaun expects to perform an experiment this dry season.

NT Quarantine and Inspection Branch

In between wrestling with devising legislation on banana diseases and sundry quarantine insects, **Ted Fenner** managed to do a little hands-on entomology. A good series of *Bactrocera philippinensis* Drew and Hancock was bred from fruits of the Indian almond, *Terminalia catappa*, carried by a Darwin resident returning from a visit to the Philippines. They were declared as being intended for planting and the person was most surprised to learn that there were fruit fly maggots in the rather dry, fibrous flesh. The fly, recently described, is another economic member of the Oriental flute fry group.

Glenn Bellis made a bee-line for Bribie Island along with other aspiring apiologists (?), honing their skills for exotic bee search and destroy missions.

NT Dept of Health and Community Services Medical Entomology Branch

The wet season is now almost over, bringing to a close a very busy time keeping Darwin relatively free of saltmarsh mosquitoes. An

analysis of the mosquito monitoring results shows that saltmarsh mosquitoes were well down on last year's numbers. The record wet meant a lot of hatching occurred in areas that were above high tide influence and which were not the usual breeding sites. Hence more mosquito surveys and control operations were required. The reduction in numbers, in spite of the record wet, was only achieved through the tremendous efforts of all the Branch staff. Their efforts were acclaimed at a recent meeting of the Mosquito Control Advisory Committee.

The Branch hosted a visit by a group of Indonesian Health officials in March, including a number of vector control officers who were interested in the monitoring and control program.

Planning and development matters have been high on the agenda over the last few months, with **Brian Montgomery** preparing baseline reports for a number of mines and numerous desk evaluations of other developments, while **Peter Whelan** has been involved with evaluating the new port development area, new defence facilities and a site for the detention of boat people.

Gwenda Hayes has been busy writing up various reports after a hectic wet season, including a thorough *Aedes aegypti* survey of the Darwin area, which confirmed the continued absence of the dengue mosquito. **Ross Nowland, Barbara Love** and **Lisa Knight** are working steadily on the routine monitoring and control operations throughout the Territory and writing up reports and preparing graphs of the results of the various monitoring programs. They do not want to hear of another drenching storm or a mangrove survey for at least six months! **Martin Shivas** is starting to make headway on pinpointing a *Culicoides ornatus* breeding site in Darwin Harbour after homing in on an area located by the Branch broad surveys.

As well as other duties, **Gwenda Hayes** is now actively involved in the preparations for the inaugural Darwin Mosquito Control Course to be held from 30 May to 2 June. Over 30 participants are coming, including three from overseas. Any person interested in submitting a late entry can contact Gwenda on (089) 228529.

DPI&F Weeds Branch

For those Darwin residents sick and tired of mould growing on every household surface, the solar hot water system providing a tepid trickle and the garden reduced to a quagmire - suck eggs! The record wet season could not have come at a better time for the mimosa biocontrol project. Plant pathologist **Matthew Wienert** of CSIRO in Brisbane, and new recruit and all-round fun-guy **Bertie Hennecke** managed to produce several large batches of the mimosa pathogen *Phloeospora mimosae-pigrae* and spray it around the Top End from a small aluminium dinghy during violent electrical storms. Follow-up surveys showed evidence of a "take". The mimosa flower weevils, *Coelocephalapion aculeatum* and *C. pigrae* were well established at their respective release sites when we finally managed to swim the swollen rivers and crocodile infested swamps to reach them. And the sesiid moth *Carmenta mimosa*, which proved so difficult and time-consuming to rear, has now become a major pest of our potted mimosa plants. Perhaps we should ask **Shaun Hood** of UQ for some of his Neem juice. **Wendy Forno** of CSIRO Division of Entomology in Brisbane was a recent visitor to examine progress in the mimosa project and to talk money.

Colin Wilson and **Debbie van Rangelrooy** both attended the ERISS wetlands workshop in Kakadu, and spent several nights somewhere near the right hind leg in the Crocodile Hotel. I know that the concept of a hotel built to resemble a crocodile sounds incredibly tacky, but difficult as it is for me to admit, it actually looks rather good. They also went to the "Getting a Buzz from Insects" workshop put on by **Geoff Monteith** and **Heather Janetzki** of the Queensland Museum and, along with **Grant Flanagan** and **Leslee Hills** attended the opening of the "Gargantuans in the Garden" display at the NT Museum.

Colin Wilson, who is involved in the ACIAR-funded project on biological control of Siam weed (*Chromolaena odorata*) in Indonesia, visited West Timor recently to advise co-workers at Nusa Cendana University in Kupang on rearing and release of the arctiid moth *Pareuchaetes pseudoinsulata*. Early signs of establishment of the moth are promising. The entire DPI&F Weeds Branch, along with sundry interstate quarantine botanists and Queensland entomologist **Rachel McFadyen**, will be visiting West Timor during May to study the progress of the ACIAR project, become familiar with exotic weed threats and run a weed identification and control workshop aimed at local agricultural scientists and advisers.

Colin WILSON
Regional Councillor

NORTH QUEENSLAND

Tropical Public Health - Cairns

The Unit has been very busy the last few months with a small outbreak of dengue fever. The initial case occurred in early February in Manunda (a Cairns suburb) in a resident who had travelled in Thailand. Initial house-to-house inspections revealed significant *Aedes aegypti* (the mosquito vector) breeding in the area. This mosquito breeds in domestic containers, such as pot plant bases, old tyres and the like. TPHU officials (**Scott Ritchie** and **Andrew Van den Hurk**) and Cairns City Council inspectors eliminated breeding containers (mainly pot plant bases) and sprayed affected areas with pyrethrum ULV. Nonetheless, three weeks later the Unit was notified of a further 2 cases in the same street!

Obviously, there was local transmission and the chance of a large outbreak. Inspections were widened to include all residences within 0.5 km of the epicentre. Further surveys revealed additional mosquito breeding, with about 20 breeding containers per 100 households. A strong media campaign to inform the public about the outbreak and to implore them to remove containers was begun. Additionally, people in the outbreak area were warned to kill mosquitoes in and under their houses. *Aedes aegypti*, the cockroach of mosquitoes, resides in dark nooks and crannies and under high-set Queenslanders. Space sprays, coils and plug-in insecticidal mats can all be used to kill *Aedes aegypti* in houses. With this two-pronged approach it was hoped to minimise further cases from currently infected mosquitoes and to prevent the spread of dengue into other suburbs.

As of early April no more cases had been confirmed. Three more weeks with fingers crossed would give the all clear.

But with the Unit breathing a bit more easily, news broke of another mosquito trouble spot, Badu Island in Torres Strait. Initial reports suggested Murray Valley encephalitis had been contracted by three residents. This arbovirus is uncommon in far north Queensland despite vector abundance.

On the research front **Scott Ritchie** has been looking at sampling adult *Aedes aegypti*. He is comparing the traditional Australian mosquito trap (the EVS trap) with the Fay Prince trap, an American invention touted as the best. Additionally, work has begun to develop a target that, when baited with dry ice, attracts *Aedes aegypti* which can then be collected with a sweep net. It's frustrating work as *Aedes aegypti* numbers are typically low (<5) at any one house. This is aside from gaining permission to trap, and the dogs, kids etc. that might mess with or on the traps! Nonetheless, the early results look good, especially for the target.

Andrew Van den Hurk has been accepted into a Masters program at James Cook University under the supervision of **Scott Ritchie** and **Phil Weinstein** (JCU). He will be studying the seasonal abundance of the subspecies of *Anopheles farauti*, the vector of malaria in far north Queensland.

Zoology Department, James Cook University

The entomology group is apparently missing the Society's president at the helm - it is now well known that **Rhondda Jones** has been promoted to Deputy Vice Chancellor at JCU, and she is therefore no longer head of the Department. Fortunately, she is still keeping her fingers in research and postgraduate supervision in entomology, with corridor consultations between meetings ensuring continuity.

Chris Hill and **Phil Weinstein** are now both running their entomology courses in first semester (to take advantage of the wet season), and **Ian Cook** and **Chris Reid** follow on with theirs in second semester. **Jamie Seymour** has also joined the group to cover Rhondda's teaching load in Pest Management and Biometrics. He has just about tied up the loose ends of the green vegie bug project at Stahmann farms (Moree), having produced the first draft of the GVB control model with **Don Sands**.

With so much teaching it inevitably falls on the postgraduates to prop up the research effort. New faces include: **Andrew Ward** (sugar cane pests), **Jeremy Billington** (rainforest ants), **David Harley**, **Andrew Van den Hurk**, **Karen Cameron** and **James Moloney** (vector borne disease epidemiology), and **Erich Volschenk** (troglophilic pseudoscorpions). The Department also has a new postdoc, **Mark Blows**, who is studying the ecological and genetic properties of central and marginal populations of native *Drosophila*.

BSES - Meringa

Keith Chandler was due to accompany **Peter Allsopp** to PNG to review the entomology program and pest management at Ramu Sugar. While there they were to discuss the PhD program of local

entomologist, **Lastus Kuniata**, on a moth borer of cane (*Sesamia grisescens*).

QDPI - Mareeba

Ross Storey has again succumbed to the irresistibility of hospital food breaking his leg in a fall at work in early February. Two months later Ross was looking for an escape route, some Red Rooster and a non-commercial TV channel. A return to work sometime in May looks likely.

Ruth Huwer was about to return to Germany having almost completed her PhD program on the host plant relationships and alternate controls for the banana spotting bug, *Amblypelta lutescens lutescens*. She hopes to be able to present her thesis to Justus-Liebig University in English, which will help our cause no end.

Prof. **David Rosen**, Hebrew University, Jerusalem, visited the Department in April *en route* to the Nicholson Centenary Meeting in Canberra. He presented a deliberately provocative seminar on "Classical Biological Control - An Environmental Boon or Bane". Some of his proposals would give conservation groups more than a little heartburn.

David Tenakanai, Laloki Agricultural Research Station, Konedobu, PNG, spent several days sharing in entomological activities at Department of Primary Industries. David and a marketing compatriot were on a 6 week familiarisation tour of some of Queensland's horticultural areas.

Harry FAY
Regional Councillor

S.E. QUEENSLAND

Queensland Department of Primary Industries, Indooroopilly

The Fruit Fly Taxonomy and the Fresh Fruit Disinfestation groups have merged to form the new Market Access Technology group. **Dick Drew** is the leader.

Rob Corcoran's ACIAR project investigating heat disinfestation treatments against Oriental fruit fly has been established in Malaysia to confirm if mango treatments currently used to control Queensland fruit fly and Med-fly will be suitable against Oriental fruit fly in the event that it arrives in Queensland. Most of the work is being done in Malaysia where the pest is endemic. **Rod Jordan** of the Horticulture Post-harvest Group (DPI - Hamilton) is collaborating.

Queensland Department of Primary Industries, Applethorpe

Frank Page was involved with an insect identification workshop for vegetable growers on the Granite Belt. This workshop was a trial run for possible use in other areas.

Frank also reports that his bait spraying trial on apples has finished and it has gone reasonably well. Some damage occurred in unsprayed fruit but no damage was present in sprayed fruit. High fruit fly activity occurred during February/March. In an unsprayed block of apples not associated with the main trial 87% of fruit were fly infested, but at a sprayed block on the trial property no damage was observed. This block is generally never sprayed by the cooperating farmer.

Queensland Department of Primary Industries, Rockhampton

Rod Elder is coming to the end of a 3 year project on Oriental scale in papaws. **Peter Leach** is continuing his Masters study on *Dolichotetranychus* mites in pineapples. This study is being undertaken in conjunction with the University of Central Queensland.

Gordon SIMPSON
Regional Councillor

University of Queensland
Department of Entomology

Gimme Walter has taken study leave for six months during which he will visit the Philippines, Slovenia and the US. Meanwhile, **Joan Bryan** has just come back from London and Liverpool where she spent two and a half months of study leave.

Bronwyn Cribb (ex UQ entomology) has been seconded from the Microscopy Centre on a temporary basis to teach Insect Behaviour in the department.

David Headrich, from the University of California (Riverside) will be visiting the department in March to talk tephritids with **Gordon Gordh** and hopefully wind up a textbook on morphology the two have been working on.

Myron Zalucki was visited by **John Rogers, Dave Holdom** and **Peter Pottinger** from the Sugar Research and Development Corporation to discuss cane grub research as part of a review of the BSES. Myron says to watch this space. **Paul Robinson** and **Helen Nahrung** have been employed to do casual work for Myron on the

Cashew project. Technical Assistant, **Matthew Foote** resigned in February to continue his studies at Rockhampton.

Upcoming seminars in Rm 448 at 1pm include: on the 1 March, "Gall midges: A study in Diversity" by **Raymond Gagne** from the US Dept of Agriculture, Washington and on the 15 March, "Sensory traps and the evolution of courtship behaviour in the water mite *Neumania papillator*" by **Heather Proctor** from Queen's University, Ontario. Heather's seminar, in particular, should be well attended as this will be our first opportunity to meet **David Walter**'s new "better half"!

The department welcomes several new students and old students embarking on higher degrees. **Miriam Acda** from the Philippines, **Daren Alseemgeest** and **Paul Robinson** have enrolled for the Diploma of Science, **Andrew Loch** has commenced his Honours year under **Myron Zalucki, Liza Miller** has commenced her MSc under **David Yeates** and **Owen Seeman** received an APA scholarship to complete his PhD under **David Walter**.

The department said farewell to **Vijay S. Vijaysegaran** who is returning to the Malaysian Agricultural Research and Development Institute, Kuala Lumpur after finishing his PhD thesis on fruit flies, *Bactrocera* sp. The department also congratulates **Michelle Cousineau** for being awarded her PhD on gene flow in *Aedes vigilax* and notes the departure of **D. Abeeluck** to his home country, Mauritius, following the submission of his MAgSc thesis.

Greg Daniels reports his January trip to Iron Range, Mt White and the McIlwraith Range was a bit of a disaster with very few insects caught due to the cold and dry conditions. Not deterred, Greg and **Margaret Schneider** will be going on the Muswellbrook Reserve Scientific Study from mid April to mid May, which is being organised by the Royal Geographical Society of Queensland. The Muswellbrook Reserve is part of the Lawn Hill National Park in far northwestern Queensland. Botanists and zoologists of diverse interests will be participating in the three month study. Margaret and Greg will be collecting insects, particularly flies and hope to find many new and exciting things as almost no collecting has been done in the area.

CRC for Tropical Pest Management

Friday 24 February was a special day for the Centre, celebrating the two year extension the Centre has been awarded. To mark the occasion, **Max Whitten** Chief of the CSIRO Division of Entomology presented a seminar entitled "TIPM: a technical or social challenge?" Supporting attractions included demonstrations of the latest developments in the Centre's software, a small display of selected research projects, and a barbecue lunch. The Centre's first (released) video was on display, a 6-minute video on the plant project, concentrating on cotton. If you would like to borrow this video, contact **Peter Room** (CSIRO) or **Kim Sprott**.

Software developments are forging ahead and the production of the brochure Software for Pest Management indicates the progress we have made over the last three years in developing and making software available worldwide. If you would like a copy of this brochure contact **Bryce Skarratt** (3651574).

The Centre welcomes **Mustapha Jallow**, a PhD student, who has received a joint two year scholarship from the Centre and the CRC for Sustainable Cotton Production. Mustapha is researching *Heliothis* oviposition and he will be dividing his time between here and Narrabri.

Elaine Brough (QDPI) presented two papers at the 4th Pacific Rim Biotechnology Conference in Melbourne. Whilst visiting New Zealand over Christmas, Elaine spent time with **Steve Wratten** at Lincoln College discussing closer links with CTPM. She also talked to **Tony Connor** and **Peter Miles** on their genetic engineering projects aimed at improving plant defences against sucking bugs. Peter Miles will be visiting CTPM in the week beginning 10 April during which time he will give a seminar at CTPM, and talk at DPI Nambour and a Queensland Entomological Society meeting.

David Adamson went to Canberra to the ABARE Outlook Conference for agricultural economists. He has returned loaded with reports which you can borrow if interested.

Larissa Wilson went to a workshop on environmental groups run by Greening Australia. The workshop covered community groups as agents of change, problem people and issues concerning them, and stress/burnout management. See Larissa if you would like to read the notes.

Larissa, Cathy Simpson and **Sean Skilton** are coordinating work on a CTPM home page for inclusion on the WWW. Stay tuned for more information.

At the end of March, a workshop on *Brassica*

pest management will be held as the first step in the final stages of embarking on an ACIAR joint venture with China, specifically with Professor **Liu Shu Shang** from Zhejiang Agricultural University, Hangzhou. **Peter Deuter** (QDPI) at Gatton is the project leader. Another workshop, on whitegrubs, will be held in May, again to provide a basis for developing an ACIAR project, this time with India. **John Rogers** (QDPI) at CTPM HQ is the project leader. Also in May, the Centre is hosting an international workshop on the impact of global change on insect, disease and weed pests, associated with the project being carried out in the Centre, lead by **Bob Sutherst**.

On 15 & 16 February, the Centre's 1994/95 Vacation Scholars presented overviews of their projects. The presentations were of a high standard, with some interesting and relevant results and recommendations discussed.

Qld Institute of Medical Research
Mosquito Control lab

Brian Kay has spent a week in Hanoi, Viet Nam, to start up a research and training project for low cost dengue control. The 3 year project is in collaboration with the Australian Foundation of the Peoples of the South Pacific and the National Institute of Hygiene and Epidemiology, Hanoi. Objectives are the development of entomological leadership in Viet Nam (including some postgraduate training), evaluation and application of new surveillance methods for *Aedes aegypti*, biological control of container-breeding mosquitoes using predacious copepods and the water boatman, *Micronecta quadristridulata*, and the development of community *Ae. aegypti* control strategies. Of the 136 outbreaks of dengue/dengue haemorrhagic fever investigated by NIHE in Viet Nam, 98% were attributed solely to *Ae. aegypti*. **Lynda Muir** and **Mark Hearnden** (JCU) are associate investigators.

Michael Brown has returned to the lab as the Local Authority Research Committee entomologist. Michael's position will involve research directed towards improved mosquito control, according to LARCUs priorities. Michael will also provide technical advice, coordinate research carried out by the Local Authorities, and facilitate training and dissemination of relevant research data to Local Authority personnel. Welcome back Michael.

Visitors this month were exQIMRite **Scott Ritchie** who flew in from Cairns, and **Amanda Mowatt**, exTownsville City Council health officer and mossiebuster now relocated in Brisbane.

CSIRO Division of Entomology
Long Pocket Labs

A workshop on fruit piercing moths sponsored by CSIRO and ACIAR was held in Brisbane from the 16 to 21st of January. The workshop provided a venue for discussing research projects and reviewing progress on biological and other control methods for fruit piercing moths in Australia and the western Pacific. Participants from the Pacific included representatives from Fiji, Tonga, Micronesia, American and Western Samoa, New Caledonia and Guam. Australian participants included industry and grower organisations as well as James Cook Uni, CTPM, QDPI and CSIRO.

Veronica Brancatini went to Darwin to collect some very expensive beetles. Populations of *Rodolia limbata* were depressed (as was Veronica) due to the severe wet season. Last year, this insect decimated populations of breadfruit mealybug in Micronesia. It will be released in Kiribati this year.

Marc Coombs and **Shaun Winterton** drove to North Queensland chasing *Alciphron glaucus*, a native insect required for host testing a green vegetable bug parasitoid. **Les Ring**, from Innisfail, helped to locate the target of their search. Shaun went looking for lacewings and aquatic plants and found the first record of water wisteria *Hygrophila difformis* in Australia in a creek north of Townsville.

Jim Hanan visited collaborators at the University of Calgary where he presented the state of plant modelling in Brisbane and they designed software systems for simulating insect-plant interactions. **Peter Room** will be attending the International Plant Protection Congress in The Hague in July 1995 where he will present work on modelling plants. **Miriam Raymond** will visit in April to discuss progress in modelling cotton plant growth.

Water hyacinth has been the subject of much attention. **Richard Chan** surveyed for the weed in Sabah, East Malaysia. He found many areas with dense growths and other areas on flood plains where rapid regrowth was occurring after the wet season flush-out. **Ken Harley** visited Uganda on a CSC project to enhance biological control of water hyacinth on Lake Kwoga on the Nile River. He then travelled to Zambia to investigate prospects of establishing biological control of water

hyacinth there. **Mic Julien** was in Ghana on an FAO consultation on management of aquatic weeds.

John Stanley, from Uni of New England, has begun work with **Mic Julien** on *Acigona infusella*, a biological control agent against water hyacinth. In this collaborative project with the USDA the effect of this insect on *Pontederia cordata* will be assessed. *P. cordata* is an exotic in Australia but is native to the USA and hence field studies can be undertaken here.

After a trip to Manaus, **Wendy Forno** suffered an evil Amazonian amoebic infection and, worse yet, the treatment for it. Wendy still maintains that visiting the Amazon and the consequent ravages on her health is better than visiting Canberra for a program meeting.

Qld Dept of Lands
Alan Fletcher Research Station

Dane Panetta joined AFRS in February as professional leader replacing **Graham White** who resigned in November. Dane has 20 years experience in weed ecology. He studied the ecology of groundsel bush for his PhD at the University of Queensland. Later he worked for the Western Australian Department of Agriculture and more recently for the Land Protection Branch, Qld Dept of Lands. He has a special interest in environmental weeds.

Alan Tomley has been busy this summer rearing and releasing a rust for the biological control of rubbervine, **Cryptostegia grandiflora**. He has just returned from another light plane trip around the gulf country. The current wet weather is ideal for the rust, but has provided some interesting flying conditions with the odd hairy take-off and landing on rain sodden bush airstrips.

Tim HEARD
Regional Councillor

Dick Drew was recently honoured by recognition as a Member in the General Division of the Order of Australia (AM). The award recognises his significant contributions to entomology and fruit fly research and was announced on 26 January 1995.

SOUTH AUSTRALIA

Entomology Unit, South Australian Research & Development Institute

Dennis Hopkins and the rest of the Unit's staff have settled quickly into new premises at the Waite Campus. New and expanded facilities on campus include the recently opened and very impressive Woolhouse Library and the recently commissioned Plant Quarantine Glasshouse, a joint SARDI/University of Adelaide quarantine facility. The Quarantine Glasshouse/Insectary will be used during the import of a range of biological control agents for invertebrate and weed pests in the near future.

Following hard on the heels of the Unit's relocation to the Waite Campus, it has been redesignated from Primary Industries SA to the South Australian Research & Development Institute (SARDI). Contact numbers and addresses for staff, however, remain unchanged.

Following concerns over last year's detection of "actionable" invertebrates on export navels to the United States, the Unit has recently begun a major push into citrus entomology. In February, **Greg Baker** ventured into numerous citrus districts of New South Wales in search of *Coccophagus gurneyi*, a parasitoid of the citrophilous mealybug. The parasitoids proved largely elusive on this occasion, however. It is hoped that *C. gurneyi* will be mass-reared and released in South Australia's Riverland in the near future. Greg was accompanied by **Sharon Foulis**, of the Loxton Research Centre, in a survey of the occurrence of mealybugs in citrus orchards in the Riverina, Sunraysia and Swan Hill districts in March. **Peter Taverner** and **Bill Frost** have been appointed as post-harvest entomologist and acarologist, respectively, with the HRDC-funded export citrus disinfestation program. Peter is investigating the effect of oil dips on the survival of LBAM larvae, mealybugs and mites sheltering under the calyx of export oranges, while Bill is surveying the occurrence of mites, particularly the Tarsonemidae and Tenuipalpidae, in Riverland citrus orchards. The disinfestation program has input from **Murray Brown** of the CSIRO Division of Horticulture at North Ryde, who is investigating the viability of hot water treatments in the control of surface arthropods on oranges.

Dennis Hopkins attended a workshop at the Division of Entomology in Canberra on the release and progress of biocontrol agents of Paterson's curse in Australia on the 16-17th March. More recently, Dennis and **Ken Henry** have released the weevil *Magulenes larvatus* in the Adelaide Hills

and at Clare in South Australia's mid-north. The release program, jointly funded by AMLRDC and WRDC, is expected to augment the effect of other biological control agents previously released in South Australia. **Greg Baker** attended an ACIAR workshop at St Lucia, Brisbane, in March. The workshop was aimed at development of IPM control strategies for DBM in China and Australia.

Visitors to the Unit over the past 3 months have included **Jim Cullen**, who took the opportunity to meet with **Dennis Hopkins** while attending a workshop in Adelaide. Several members of the USDA Animal and Plant Health Inspection Service (APHIS), including **Darcy Axe**, **Wesley Garnett** and **Michael Shannon**, have visited to discuss the citrus disinfestation program with **Peter Bailey**, **Peter Taverner** and **Bill Frost**. **Richard Baker** and **Jocelyn Cowley**, of the Lynfield Plant Protection Centre, MAF, New Zealand, visited **Peter Bailey** to discuss pest risk assessment in February. Also in February, **Marianne Frommer** and **Merryl Robson**, from the Fruit Fly Research Centre of the University of Sydney visited the Unit to outline with **Peter Bailey** their plans to use molecular techniques to identify the source of Adelaide outbreaks of fruit fly. Meanwhile, an outbreak of Q-fly in the inner-Adelaide suburb of Clarence Gardens in February was treated with the mass release of sterile males. This is the third such control attempt in Adelaide. As in previous releases, the reason for very low recovery rates remains something of a mystery.

Grape Production Series - "Diseases and Pests", the first in a series of books on grape production in Australia and New Zealand was launched by the South Australian Minister for Primary Industries, the **Hon. Dale Baker**, in February. Among the entomologists to contribute to the book were **Peter Bailey**, **Greg Baker**, **Greg Buchanan**, **Geoff Furness**, **Steve Goodwin** and **David James**. The book, jointly funded by the Grape and Wine Research and Development Corporation, SARDI and Primary Industries SA, is intended as a manual for vineyard managers and operators and presents a comprehensive overview of grape production. It addresses current knowledge and practices in relation to pests and diseases, as well as detailing spray technology both in corrective and preventative applications.

State Water Laboratory

Peter Goonan and **Chris Madden** have begun the third survey of macroinvertebrates at the Monitoring River Health sites in S.A. with a trip to the South-east accompanied by the boss and media regular, **Phil Suter**. They met up with the team from the Victorian EPA comprising **Leon Metzeling**, **David Tiller** and **Peter Neill** to compare the rapid assessment field-pick method of the Victorians with the method used in S.A. of preserving samples in the field and sub-sampling in the laboratory. The Victorians were somewhat sceptical about the appearance of a couple of sites but were surprised at the abundance and variety of invertebrates. The dry summer meant that only six of the 15 sites had water present and more time was spent hunting frogs than bugs! The first survey has been completely sorted and the data is currently being analysed. To catch up with the backlog of samples **Fran Sheldon** has joined the team for six months to improve her identification of chironomids! So far more than 300 invertebrate taxa from more than 100 different families have been recorded from 140 sites in South Australia.

The streams of SA are being thoroughly investigated at the moment with **Peter Schultz** and **Sally Sheerlock** sampling 26 sites on six rivers to monitor the effect of water harvesting on the streams as well as longer-term projects on the Sturt River, Onkaparinga River, Dawesley Creek and wetlands in the Adelaide region.

Mosquito Research Group
University of South Australia

The Mosquito Research Group has had a promising start to the year. **Michael Kokkinn** has had three Honours students from the Zoology Department at the University of Adelaide choose to do their major research project on mosquitoes under his supervision. Already there is an atmosphere of lively discussion and argument about all theories biological.

Scott Bemmer is looking at life history variations in *Culex quinquefasciatus*. **James Cowling** is investigating attractants for *Culex annulirostris* adult females. **Matthew Goodwin** is trying to define the niche of larval *Culex annulirostris*. In addition, Michael has a retired biochemist, Mr **Bill Williams** tinkering with electrophoresis of mosquitoes. It all seems to vindicate several years of setting the laboratory up and getting colonies going etc.

The group was taken with the review of the book; *Parasitoids. Behavioural and Evolutionary*

Ecology by Godfray in the February 1995 volume of the J.A.E.S. In it, **G.H. Walter** raises questions about Optimality Theory which has set us all thinking and puzzling about our own beliefs.

Private Entomology Sector

Things have been relatively quiet during the 1994/95 lucerne season on the entomology front in the South-East of South Australia, according to **James De Barro**. For the first time in 10 years, most populations of green mirids were below threshold levels. Similarly, aphid and seed wasp activity was minor, as were numbers of beneficials. James suspects that weather conditions suitable for migration of these insects was adversely influenced by the dry and unseasonal weather pattern in 1994. *Helicoverpa* was the most active pest, although NPV was very prevalent in February and decimated the final *Helicoverpa* generation, in many cases eliminating the need for further insecticide sprays. Yields from the lucerne seed crop season were generally very good, although some crops were damaged by heavy rains in April.

Bill FROST and Mike KELLER
Regional Councillors

TASMANIA

Queen Victoria Museum and Art Gallery

The North East Tasmanian Symposium was held from 4-6 February at the Raymond Ferrall Centre in Launceston. Attendance of 112 people ensured the success of **Tim Kingston**'s initiative. **Bob Mesibov** has completed gathering invertebrate database information for the NEGP Tasmanian Invertebrate Mapping Project and is now preparing a report. An invertebrate specialist register for Tasmania has been compiled by **Louise McGowan**.

Tasmanian Museum and Art Gallery

Roger Buttermore is delving into bumblebee distribution in Tasmania. **Lynne Robertson** has completed her National Estate project surveying spider species in NW Tasmania.

Forestry Tasmania

Jane Elek, formerly of CSIRO, has joined the Chrysomelid Control Unit replacing **Anna Greener** who is enjoying raising a family (*moved on to greener pastures? -Ed.*) **Dick Bashford** has been examining autumn gum moth outbreaks in *Eucalyptus nitens* plantations in NW Tasmania. **Rob Taylor** has obtained a NEGP grant to investigate the distribution of two rare lucanid beetles.

University of Tasmania

Alastair Hunt, PhD student at CRC Hardwood Forestry, talked on the foraging behaviour of *Cleobora mellyii*, a predator of chrysomelid eggs, at the Department of Agriculture Science Seminar Series. **John Madden** is back at work after a short illness. We all wish him a complete recovery.

Dick BASHFORD
Regional Councillor

VICTORIA

Monash University
Department of Ecology
and Evolutionary Biology

It is with sadness that the Department announces the sudden passing away of **Dr Brian Roberts** on March 2. This loss has shaken the entire Entomology section. Over the 25 years of Brian's career, a great number of students in entomology have benefited from his expertise and dedication to teaching, particularly in the area of insect physiology. Brian's warmth and enthusiasm will be remembered by many of his postgraduates, now entomologists in various institutions scattered all over Australia and as far as Indonesia. His talent for teaching and developing teaching methods was put to great use more recently in the IDP/AIDAB programs with Indonesia, from where Brian had just returned. Brian still had several projects ahead of him and was so looking forward to his honeymoon trip at the end of the month. Brian will be sadly missed in the Department and our deepest sympathy goes to his wife Yvonne and daughters Kristy, Anna and Eliza.

Department of Agriculture, Energy and Minerals
Institute for Horticultural Development

Yes! This department has undergone yet another name change and attendant restructuring, following a merger with Energy and Minerals. We're still awaiting the appearance of yet another logo (the last one's only just hit the streets). Things have been pretty quiet on the entomology front here (judging from the "slow" response to calls for *Myrmecia* articles) - the big news is the birth of a baby daughter (Emily) to **Vicki Bates** in

early April; all are fit and well.

Museum of Victoria
Invertebrate Survey

Reports from Invertebrate Survey to *Myrmecia* have been lacking over the last six months because most of the staff have been tied up in one of two major events (for some staff, both). First there has been the matter of refitting the offices and laboratory. This thankfully was completed before the end of 1994, but caused a major relocation of staff to various parts of the Abbotsford annexe (and in some cases, working at home was the only solution). All specimens and equipment had to be relocated or packed away, and we are now in the position of unpacking material again.

The second major event was conducting field work to central Australia as part of the celebration of the centenary of the 1894 Horn Expedition. While the original Horn Expedition collected botanical, zoological, geological and anthropological material, the 1994-1995 trips concentrated on invertebrates. Field work was conducted over two four week periods: once during October 1994, and the second trip in March 1995. Field work was restricted to the West MacDonnell Ranges, Kunoth Paddock, Palm Valley, Watarrka (Kings Canyon), and Uluru-Kata Tjuta (Ayers Rock-Olgas). The October 1994 trip was run while the area was still in the grip of a bad drought. Luckily, some 300 mm of rain fell in the northern areas before the March 1995 trip. While most of the participants were Museum of Victoria staff, "outsiders" who participated included **Andy Austin** (University of Adelaide), **David Britton** (ex La Trobe Uni), **Peter Cranston** (ANIC), **David Rentz** (ANIC), **Robert Raven** (Queensland Museum), **Brian Smith** (Launceston Museum), **Shirley Slack Smith** (West Australian Museum), and **Tom Weir** (ANIC). We were ably supported by a large band of volunteers who paid their own way on the trip.

Amanda Kobelt, who was employed on the grasslands invertebrate survey, took up an appointment at Monash University. **Beverley Van Praagh** completed the summer count of the Eltham Copper Butterfly.

Andrew HENDERSON and Robyn COY
Regional Councillors

WESTERN AUSTRALIA

WA Department of Agriculture

Bill Woods has confirmed the recent discovery of the citrus leaf miner (*Phyllocnistis citrella*) for the first time in southwestern WA. This pest has been present in northern Australia since the turn of the century, but its range has been expanding rapidly in recent years. In 1988, *P.citrella* was present in only the NT, QLD and NSW. By 1993, it was attacking citrus in inland NSW, VIC and SA. Now in 1995, this pest is present in almost all areas where citrus is grown in Australia.

The Department's entomological expertise has been seriously diminished with the recent departure of **Tony Postle** (contract expired). The need for a permanent curator of the Department's Insect Collection will hopefully see Tony return in the not too distant future.

Curtin University of Technology

Mogens Gissel Nielsen (Aarhus University) recently visited the School to discuss ant matters with **Jonathan Majer** and to look for potential ant-mangrove associations in the outlying mangrove community at Bunbury. Whilst at Curtin he presented a seminar entitled "Ecology of ants in tidal meadows of Denmark".

Lynne Whiffler and **Jonathan Majer** have just completed fogging the canopies of five species of eucalypt in the Kalgoorlie area. This is part of a project to investigate the effect of air pollution on the biota of the area. This data should add to that which JM and **Harry Recher** have been collecting from eucalypt canopies in other parts of the State.

Michelle Barratt has recently commenced an honours project on predation of tadpoles by dragonfly nymphs in the newly created wetlands associated with the Capel mineral sand mining project.

CSIRO Division of Entomology, Floreat Park

John Scott participated in the national seminar on bridal creeper and weeds of conservation concern held in Adelaide in April. The meeting emphasised the growing importance of this weed in Australia.

The Entomology group from CSIRO was represented at the recent WA Farmers' Federation FarmSmart Expo. **James Ridsdill-Smith**'s group

displayed their recent work on developing resistance to red-legged earth mite in subclover as part of the CRC for Legumes in Mediterranean Agriculture (CLIMA) display. **John Scott** and **Paul Yeoh** showed their recent work on the biological control of *Emex* using insects imported from Israel. These insects are currently in quarantine being tested for host specificity.

James Ridsdill-Smith, John Matthiessen and **John Scott** all attended the Nicholson Centenary "Frontiers of Population Ecology" Conference in Canberra in April.

David COOK
Regional Councillor

OVERSEAS NEWS

PAPUA NEW GUINEA

PNG has started training her own entomologists and eleven final-year biology degree students are currently registered for an intensive one-semester course in entomology at the University of Papua New Guinea under the supervision of its part-timer, Professor **Ray Kumar**. A two year MSc program in Entomology has been developed but this has still to pass through the hurdles of university boards and committees.

The following articles of entomological interest appear in the latest publications of the Department of Agriculture and Livestock:

PNG Journal of Agriculture, Forestry and Fisheries (November 1994, Vol. 37, No.2)

1. Notes on two minor insect pests in the Highlands region. E.S.C. Smith.
2. Phytophagous insects of the giant sensitive plant (*Mimosa invisa*) at Ramu, Papua New Guinea. L.S. Kuniata and H. Nagaraja.
3. *Cordyceps* sp., an important entomopathogenic fungus of cicada nymphs at Ramu, Papua New Guinea. L.S. Kuniata.
4. Pests and diseases of shade trees and their relation to cocoa in Papua New Guinea. S. Laup.

Harvest (July 1994, Vol. 16, No. 1 & 2)

1. Introduction of ants as potential biological control agents, with particular reference to cocoa. Prof. Jonathan D. Majer.
2. Selective bioinsecticides, selective chemical insecticides - important options for integrated pest management (IPM) in cabbage. Helmut Saucke.
3. Botanical pest control in cabbage: Potential of neem products in IPM programs in Papua New Guinea. Helmut Saucke.

Ray KUMAR
Overseas Correspondent (PNG)

ELECTRONIC NEWS

INTEGRATED BIO-SYSTEMS LISTSERVER

Integrated Bio-Systems is an unmoderated listproc list for the exchange of information and experiences on the use of biological technologies, in an integrated manner, in aquaculture, agriculture, industry, forestry and animal husbandry. This list will serve as a general list to gather people of a wide area of interests.

UNU.ZERI.IBS is created by the Zero Emission Research Initiatives (ZERI) project, the United Nations University, Tokyo and in cooperation with the Ecotechnology Network (ECOTEC).

Specialised lists will then cater for in-depth discussions and would involve experts, practitioners, entrepreneurs, researchers and students. Such lists will discuss specific technologies for selected integrated systems.

To subscribe to UNU.ZERI.IBS, send an email message to LISTPROC@CAREN.NET and in the body of the message write:

SUBSCRIBE UNU.ZERI.IBS yourfirstname yourlastname (organisation).

Please keep "yourfirstname yourlastname (Organisation)" to less than 36 characters.
Owner: Mr Eng-Leong Foo - foo@hq.unu.edu

ARACHNOLOGY LISTSERVER

Thanks to the kindness of Herman Vanuytven (DSE.VANUYTVEN.H@ALPHA.UFSIA.AC.BE)and the computer facilities at Antwerp University, arachnologists now have the opportunity of joining a roundtable discussion group (mailing list server) devoted to their specialty.

For the near future we envision that the discussion list's primary focus will be the creation of arachnological databases on the Internet. In the next few years it seems likely that the various professional societies will want to make it possible to download from the Internet some or all of:

- the various information now provided by CIDA
- the society membership lists
- Vince Roth's Spider Key
- the arachnological journals
- other existing and conceivable arachnological resources.

The burgeoning Internet databases created by entomologists show how useful and popular such resources can be. We hope the new discussion group will make it possible to come up with some specific proposals that could be considered at least in a prelimary, informal way at the Arachnological Congress this summer.

Discussion on the list will undoubtedly cover many other topics. However, we suggest that contributors keep in mind the existence of other mailing lists devoted to acarology, entomology (in the broad sense that seems to include most land arthropods), systematics/ phylogenetic computer databases, and the maintenance of natural history collections. There is also an 'arachnid' list which is primarily devoted to the concerns of those who keep arachnids (especially tarantulas and scorpions) in captivity. We envision that the topics covered in our list will be ones that are of interest very specifically to arachnologists and their societies, and that there may be long periods of silence on the list, interspersed with occasional announcements and bursts of discussion.

TO SUBSCRIBE (note for those accustomed to 'listserv' software, 'majordomo' software is subtly different):

send an E-mail message to :
Majordomo@ufsia.ac.be

Within the body of the message:
subscribe arachnology
end

(Although omitted from now on, it is helpful to put the end command after the last command.)

To get off the list send the command:
unsubscribe arachnology

To get a list of members:
who arachnology

For general information:
help

or:
info arachnology

To get a list of downloadable files (such as archived past discussion):
index arachnology

To get one of those files:
get arachnology FILENAME
(These files and some other spider-related files maintained by Herman Vanuytven can also be obtained by ftp from sesoserv.ufsia.ac.be)

TO POST A MESSAGE TO THE ENTIRE GROUP send that message to:
arachnology@ufsia.ac.be

Mark Stowe c/o Jon Reiskind
Department of Zoology
University of Florida
Gainesville, FL 32611 USA
E-mail: MKS@ZOO.UFL.EDU

COMING EVENTS

Xth INTERNATIONAL CONGRESS OF ACAROLOGY

The Xth International Congress of Acarology will be held in Canberra, Australia, from 6-10 July 1998. The host institution will be CSIRO Division of Entomology, and Congress meetings and accommodation will be in the Australian National University. Start making your travel plans now, and help us make the first ICA in Gondwana a great success. We plan to send out the first Congress circular in about June 1996.
Further Information:

Dr Bruce Halliday
Principal Research Scientist (Acarology)
CSIRO Division of Entomology
GPO Box 1700
CANBERRA ACT 2601
AUSTRALIA
Phone: (06) 246 4911
Fax: (06) 246 4000
Email: bruceh@ento.csiro.au

INVERTEBRATE BIODIVERSITY AND CONSERVATION CONFERENCE

University of Melbourne
27 November - 1 December 1995

Information & registration from:

Dr Tim New
School of Zoology
La Trobe University
Bundoora VIC 3083
ph: 03 479 2247
fax: 03 479 1551

See leaflet inserted in this issue for more information.

INTERNATIONAL CONFERENCE "TECHNOLOGY TRANSFER IN BIOLOGICAL CONTROL: FROM RESEARCH TO PRACTICE"

Montpellier, France
9-11 September 1996

This conference, sponsored by the International Organisation for Biological Control (IOBC) and CILBA, a branch of Agropolis International will examine the problems of technology transfer in biological control from research into practice.

The objectives of the conference are:

1. To demonstrate the effectiveness of biological control using an array of successful reliable examples;
2. To document the basic importance of biological control in developing IPM programs, and in sustainable agriculture;
3. To identify major problems in implementing biological control;
4. To promote interactions between entomologists, pathologists, weeds scientists and other specialists;
5. To provide a forum in which biological control researchers from the private and public sectors can meet with plant protection advisers, extensionists, teachers, producers, manufacturers, salesmen and policy makers.

For further information contact:

F. Bigler, Secr. General IOBC
Swiss Federal Research Station
Reckenholzstr. 191
8046 Zurich
Switzerland.
Fax: (33) 67 04 75 99

13TH INTERNATIONAL PLANT PROTECTION CONGRESS

2-7 July 1995

Details: *Myrmecia* 30(4): 63-64

Contact: Dr J.C. Zadoks, Organiser
13th International Plant Protection Congress
c/- Holland Organising Centre
Parkstraat 29
2514 JD The Hague
The Netherlands
FAX: 31-70-360-4846

FOURTH INTERNATIONAL SYMPOSIUM ON ADJUVANTS FOR AGROCHEMICALS

Sheraton Hotel, 13 Spring St Melbourne

3-6 October 1995

Details: *Myrmecia* 30(4): 64

Contact:
Fiona Richardson
FISAA Symposium
PO Box 1108
FRANKSTON VIC 3199
Tel: 03 785 0137
Fax: 03 785 2007

XX INTERNATIONAL CONGRESS OF ENTOMOLOGY

Florence (Italy)

August 25 - 31, 1996

Palazzo dei Congressi

Information and copies of the registration form can be obtained from:

Organising Secretariat O.I.C.
Via A. La Marmora, 24
50121 Florence
ITALY
Tel. ++39-55-5000631
Fax ++39-55-5001912

XIVth International Congress for Tropical Medicine and Malaria

"New Goals for the 21st Century"

Nagasaki Japan, 17-22 November 1996

The First Circular of the above Congress is now available. Further information is available from:

Ms S. Tominaga
XIVth ICTM Secretariat
c/- The Institute of Tropical Medicine
Nagasaki University

1-12-4, Sakamoto
Nagasaki, 852 JAPAN
(The editor of this publication has three copies of the first Circular, if anyone wants one)

9TH INTERNATIONAL AUCHENORRHYNCHA CONGRESS
Sydney, Australia
17-21 February 1997

The first Circular for this conference is now available. All subscribers to TYMBAL, the Auchenorrhyncha Newsletter, will be sent a copy. Further copies can be obtained from:

Australian Convention and Travel Services
GPO Box 2200
Canberra ACT 2601
Australia
Ph: (61-6)(06) 257 3299
Fax: (61-6)(06) 257 3256

Further information:
Dr M.J. Fletcher
NSW Agriculture
PMB 10
RYDALMERE NSW 2116
email: fletchm@agric.nsw.gov.au

NOTICES

FRESHWATER MACROINVERTEBRATE COLLECTION

Australian Water Technologies presently has a voucher collection of approximately 800 taxa of aquatic macroinvertebrates including insects, crustaceans, mites and oligochaetes, which have been collected from rivers and wetlands in coastal NSW. The collection is continually growing and is one of the largest collections of its type in Australia.

Some groups of specimens have been referred to taxonomists and we are keen to encourage the use of the collection for further taxonomic and biogeographical studies.

We would be pleased to hear from researchers conducting such studies who would be interested in examining and/or naming specimens.

For further details contact:
Dr Bruce Chessman
Ph. (02) 334 0863
Fax. (02) 334 0700

or

Dr Jane Growns
Ph. 334 0709
Email: grownsj@styx.awtensight.nsw.gov.au

I WANT BUG PREDATORS OF CATERPILLARS!

I am looking for sources / colonies / (helpful) hints for obtaining nabid and pentatomid predators of noctuid caterpillars to use in the non-target section of a virus host range study. Please contact me if you can help.

David Dall
CSIRO Entomology
GPO Box 1700, Canberra. ACT 2601
phone: 06 246 4117
fax: 06 246 4173
email: davidd@ento.csiro.au

Please Note! *Nature Australia* Associate Society Scheme

Enclosed with this issue of *Myrmecia* is a brochure advertising subscriptions to *Nature Australia* (formerly *Australian Natural History* Magazine) produced by the Australian Museum. All new subscriptions based on this brochure will attract a **$5 donation** to the Society as long as you enter **"The Australian Entomological Society"** in the space provided for the Associate Society's name at the bottom of the application form.

NEW PUBLICATIONS

NEW NEW NEW NEW NEW NEW

DIRECTORY OF SOUTH-WEST PACIFIC ENTOMOLOGY

Edited by John T. Jennings

Published by The Australian Entomological Society, May 1995. Available from early June.

Price: AUS$10.00 including postage.

This new-look Directory replaces the Directory of Australian Entomology and has been expanded to include over 930 entomologists from the South-West Pacific. Countries covered include American Samoa, Australia, Fiji, Kiribati, New Zealand, Papua New Guinea and Tonga.

For each entomologist, their full name, including given name, address, telephone, Fax and E-mail are provided as are their interests.

Separate lists of entomologists are also provided which detail organisational affiliation by country/state, and fields of interest.

Orders to: Ms Alison Roach
Business Manager
Australian Entomological Society
c/- CSIRO Div of Entomology
GPO Box 1700
Canberra ACT 2601
AUSTRALIA

Payment (in Australian dollars only, please) may be made by money order or cheque.

THE AUSTRALIAN ENTOMOLOGICAL SOCIETY
26 AGM AND SCIENTIFIC CONFERENCE
Tamworth, NSW. 23-28 September 1995

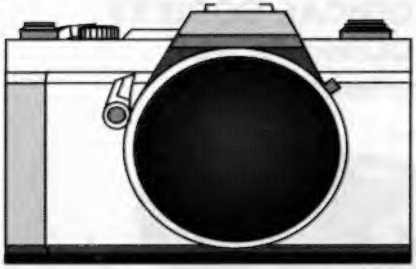
The 26th Annual Conference of the Australian Entomological Society will be held at Farrer Memorial Agricultural High School, Tamworth, NSW from 23rd to 28th September 1995. The conference will be convened by Tamworth entomologists **Robin Gunning, John Hosking** and **Royce Holtkamp**. Farrer High School is situated on the outskirts of Tamworth (about 10km from the Post Office) and is adjacent to the Tamworth Agricultural Research Centre. The school is surrounded by farmland and has nice views over the city of Tamworth and the Great Dividing Range. The School has a hall which will seat up to 400, classrooms for smaller, concurrent sessions and a large new gymnasium suitable as a poster / display venue. Farrer is a boarding school and has excellent residential and catering facilities. Both single accommodation and rooms for family groups can be arranged. School accommodation should be inexpensive. For those who wish to stay in Tamworth itself, there are motels, hotels and caravan parks to suit all tastes and budgets. The major themes of the conference will be insect conservation, biological control, cotton entomology and insecticide resistance as well as more general sessions.

Features of the conference will be a keynote address on insect conservation and a cotton entomology symposium. On the social side, there will be a day-long excursion to a spectacular national park in the New England gorge country. The conference dinner will be held at a restaurant venue in Tamworth and, during the conference, more casual social functions will be held at the venue and at the Agricultural Research Centre. There will be a conference Fun Run (with Robin as race director). "Tourism Tamworth" can arrange tours of Tamworth, a local vineyard and, if delegates are desperate enough, there is also country music!

Please Note!

QANTAS and Eastern Australian Airlines are the official carriers for the conference. In addition to the information in the insert provided with this issue of *Myrmecia*, please note that QANTAS has a help desk (Toll free 1-800-670-300 or Sydney Metropolitan 02-951-4391) whose consultants will be familiar with the conference and the discounts available. Any block bookings should be made through QANTAS Groups Department and are subject to availability, so early bookings are advisable.

THE AUSTRALIAN ENTOMOLOGICAL SOCIETY



INSECT PHOTOGRAPHIC COMPETITION

1995

'A competition to encourage photographic expertise in the field of entomology'

The Australian Entomological Society invites unpublished or not previously displayed entries to this competition which will be judged and displayed at the Society's Annual General Meeting and Scientific Conference to be held in Tamworth, NSW, during 23 - 28 September 1995.

The competition is open to members and non-members of the Society.

Entries (prints only) cannot be greater than 20 x 25cm, with the name and address of the entrant on the back. Postal entries must be carefully packed and include stamps or a postal order sufficient to cover the cost of return postage, where necessary.

Categories:
Black-and-White and Colour
* Insects,
* Micrographs
* People in entomology

Entries will be reviewed by a Judging Committee. The Society shall have the right to display selected works in public and to reproduce the photographs, with appropriate acknowledgement, on Society goods which it sells, and in magazines, for a fee.

Entries must be in the hands of the Convenor of the Annual General Meeting by 8 September 1995.

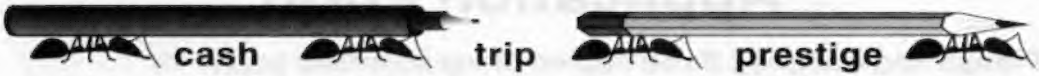
Total funds avaliable for cash prizes will be in the order of $1500.

Each entry is to be accompanied by the following information:
* Name of entrant, *Postal Address,
* Category and title of entry/entries, *Scientific name of insect, where applicable.

Forward the entry/entries and the above information to:
Dr R V Gunning,
Convenor of AES 26th Annual General Meeting
C/o Agricultural Research Centre,
PMB 944,Tamworth NSW 2340

The Australian Entomological Society

Phil Carne Prize 1995



'A prize for scientific writing to foster high-quality entomological research in young scientists'

The Executive takes pleasure in calling for applications for The Australian Entomological Society's Phil Carne Prize for 1995.

The name of the prize celebrates contributions made by Dr Phil Carne to the science of entomology and to The Australian Entomological Society.

The prize is open to any student, enrolled full-time or part-time, who is an undergraduate, honours or postgraduate student whose entry has not been submitted prior to 30 June 1995.

Entrants do not have to be members of The Australian Entomological Society.

Entries for the prize should be in the form of a scientific paper set out under the subheadings: Introduction, Materials and Methods, Results, Discussion, Acknowledgments, References. They should be 5000 words or less in size (not including references, tables, figures or summary), double-spaced typing and should be accompanied by a 100 word summary.

Three copies of entries need to be submitted to the Secretary of the Society by the closing date of 1 August 1995. Please provide stamps or a postal order to cover cost of returning entries, if required.

Entries are to be the sole work of the entrant, apart from the normally accepted input of an academic supervisor. Thus, entries should bear only the name of a single entrant.

Each entry is to be accompanied by a completed Application Form.

- entries will be reviewed by a Selection Committee to be appointed by the President of the Society.

- The winner will be invited to present the winning paper at the Society's 26th Annual General Meeting and Scientific Conference to be held in Tamworth, NSW, during 23 - 28 September 1995.

The prize will be in the form of cash remuneration to the value of $300, free conference registration, accommodation and return economy airfair to the Annual Conference, and presentation of a plaque.

The Australian Entomological Society
Phil Carne Prize 1995
Application Form

Please find attached three copies of my scientific paper for consideration for the 1995 Phil Carne Prize

Name :----------

Contact address:----------

Telephone no.----------Facsimile no.----------

Professional Qualifications:----------

Title of Entry----------

Origin of of Entry:

Degree Institute Part/Full Time

Name of First Supervisor:----------

Endorsement of Head of Department: (signature)----------

I declare that this paper is my work and has not been submitted for publication prior to 30 June 1995.

Signed:----------

Dated:----------

Return completed form with three copies of entry , by 1 August 1995, to:

Dr Paul Madge
AES Honorary Secretary
C/o Dept of Crop Protection
Waite Campus, University of Adelaide
Glen Osmond SA 5064

THE AUSTRALIAN ENTOMOLOGICAL SOCIETY RESEARCH GRANTS 1995

'Grants to encourage the advancement and dissemination of entomological knowledge, particularly in relation to Australian insects and allied forms'

The Executive takes pleasure in calling for applications for The Australian Entomological Society's Research Grants for 1995.

Total funds available will be in the order of $3000. Applications may be submitted for such items as travel, equipment or technical support.

The grants are primarily for small, short - term projects and will be available only to financial members of the Society of at least 12 months standing. Groups will be eligible provided that the primary researcher is a member.

Applications may be for any amount up to $1000, but remember that small, short-term projects which enable a diverse range of work to be funded may be favoured.

Three copies of your application need to be submitted to the Secretary of the Society by the closing date of 1 August 1995. Please provide stamps or a postal order to cover the cost of returning applications, if required.

The President of the Society will appoint and convene a Selection Committee to allocate and administer the grants. Successful applicants will be announced at the Society's Annual General Meeting on 25 September 1995.

A report to the Executive in a form suitable for publication in *Myrmecia* will be required by the end of 1996.

THE AUSTRALIAN ENTOMOLOGICAL SOCIETY

RESEARCH GRANTS 1995

APPLICATION FORM

Please find attached three copies of my submission for an AES Research Grant for 1995:

Name :_____

Contact address:_____

Telephone number:_____Facsimile number:_____

Title of Entry:_____

The following details are required in the application:

*Background

*Objectives

*Methodology

*Expected outcomes

*Detailed budget, including resources (eg. vehicle, lab. equipment) provided by the applicant or from other sources

*Expected duration and time devoted to the project

Return completed form with three copies of application, by 1 August 1995, to:

Dr Paul Madge
AES Honorary Secretary
C/o Dept of Crop Protection
Waite Campus, University of Adelaide
Glen Osmond SA 5064

THE AUSTRALIAN ENTOMOLOGICAL SOCIETY
INSECT ILLUSTRATION COMPETITION

1995

'A Competition to encourage and recognise high standards of entomological illustration'

The Australian Entomological Society invites unpublished entries to this competition which will be judged and displayed at the Society's Annual General Meeting and Scientific Conference to be held in Tamworth, NSW, during 23 - 28 September 1995.

The competition is open to members and non-members of the Society.

Entries, up to three per entrant, must be either black and white or coloured, whole-body (dorsal or lateral views) taxonomic illustrations of insects or allied forms, such as shown in *The Insects of Australia*. The mounted illustrations should not exceed 21 x 30 cm (approx. A4 size) and must be suitable for reproduction after reduction of 50%. Postal entries must be carefully packed and include stamps or a postal order sufficient to cover the cost of return postage, where necessary.

Entries will be reviewed by a Judging Committee.The Society shall have the right to display selected works in public and to reproduce the illustrations, with appropriate acknowledgement, on Society goods which it sells, and in magazines, for a fee.

Entries must be in the hands of the Convener of the Annual General Meeting by 8 September 1995

Categories: Student Section (1) Colour (2) Black and White
Open Section (1) Colour (2) Black and White

Total funds avaliable for cash prizes will be in the order of $1500.

Each entry is to be accompanied by the following information:
*Name of entrant, *Postal Address, *Current enrolment details (if a student), *Category of entry/entries, *Scientific name of Insect.

Forward entry/entries and above information to: Dr R V Gunning, Convenor of AES 26th Annual General Meeting, C/o Agricultural Research Centre, PMB 944, Tamworth NSW 2340

THE AUSTRALIAN ENTOMOLOGICAL SOCIETY INC.

FORM OF NOMINATION FOR MEMBERSHIP

To be returned to:

Dr P Madge, Secretary of AES, c/o Dept. of Crop Protection
Waite Campus, University of Adelaide, Glen Osmond SA 5064

We the undersigned

Proposer: ....
(print name here) (signature)

Seconder: ....
(print name here) (signature)

being financial members of the Society, propose the following for membership of The Australian Entomological Society Inc.:

Title .. Initials .. Given Name .... Family Name ....

of (Address): ....

....

Tel: .... Fax: ....

Email: .... Degrees, etc: ....

Occupation or Appointment: ....

Interests, experience, and publications in entomology for publication in the News Bulletin *Myrmecia* (please attach brief resumé):

I accept nomination and undertake if elected to abide by the rules of the Society, and to pay annual subscriptions by the date prescribed.

Signature: .... **Date:** ....

For <u>1995</u>, new student/retired members - \$22.50; new full members - \$45.00. **Payment with nomination required.**

....

(EXECUTIVE USE ONLY)

Nom. received: .... Nom. considered at meeting: .....

Payment received: .... Elected at meeting: ....

Membership type: .... Applicant advised: ....

REGIONAL COUNCILLORS

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Fax (02) 633 5314
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stephend@bacto.wh.su.edu.au

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Fax (06) 246 4000
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Canberra ACT, 2601
Ph (06) 246 4117
Fax (06) 246 4000
Email davidd@ento.csiro.au

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Fax (08) 303 9542
Email:
frost.bill@wpo.pi.sa.gov.au

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Fax (08) 379 4095
Email:
mkeller@waite.adelaide.edu.au

Tasmania
Mr R. Bashford
Forestry Commission
GPO Box 207B
Hobart Tas 7001
Ph (002) 33 8231
Fax (002) 33 8270

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WA Dept of Agriculture
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Ph (09) 368 3250
Fax (09) 367 2625
Email:
DavidC@apb.agric.wa.gov.au

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Berrimah Farm
GPO Box 990
Darwin NT 0801
Ph (089) 89 2211
Fax (089) 89 2181

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Fax (02) 630 4475

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